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FINAL

ARCHAEOLOGICAL RECONNAISSANCE
OF THE LOWER OHIO RIVER NAVIGATION AREA,
ILLINOIS AND KENTUCKY.

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January 1981

Prepared for:

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Contract Number DACW27-80-D-0005

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ABSTRACT

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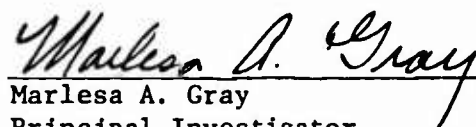
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FOREWORD

This report summarizes the results of an archaeological reconnaissance conducted by WAPORA, Inc., Cincinnati, Ohio, of all permanent and flowage easements along 36 miles of the lower Ohio River, Illinois and Kentucky. The work was conducted under a contract with the U.S. Army Corps of Engineers, Louisville District. The fieldwork, which took place from July to September, 1980, had as its purpose the location and assessment of all cultural resources, both prehistoric and historic, within the considered easements between River Miles 938.9 and 975.0. In addition, the report includes a synthesis of the information currently available concerning the prehistoric and historic use of the project area. A very important part of the synthesis, as well as of the survey results, is the relationship of the known cultural resources to their environment, the ever-changing lower Ohio River floodplain. To aid in the interpretation of these relationships, an environmental overview has also been included within the report.

It was found during the course of the project that the environmental changes occurring in the area are not so much related to original site location as they are to the probability of site discovery within the limited survey universe. Had the survey included all environmental zones surrounding the river, it would have been possible to develop statements concerning the processes affecting site location. As it stands, however, the most solidly based statements that can be made concern the relationships between current environmental trends, and the chances of finding both prehistoric and historic sites within the project area. It was found that of the 14 newly discovered sites in Illinois, 13 are located within the Lower Ohio River Navigation Area easement. Another, already known, site is also located within the easement. This can be contrasted to the figures for the Kentucky side of the river, where, of the 39 discovered sites, only 5 are located within the easement. This points very clearly to a relationship between the changing course of the river and the probability of locating sites adjacent to the river. The greater number of sites located within the easement on the Illinois side is reflective of the erosional processes occurring on that side of the river. The river is currently creating a cutbank formation on the Illinois shore, thereby undercutting and exposing sites that were previously located further away from the bank. On the other hand, the riverbank on the Kentucky side is gradually moving away from existing site locations as it creates a larger and larger point bar formation. This should result in a valuable planning tool for the Corps of Engineers and other interested land managers in the area in terms of predicting site locations and avoiding possible adverse impacts to significant cultural resources as a result of riverfront development. It will also be valuable to other archaeologists doing research in the area in terms of developing overall patterns of site locations and densities within the lower Ohio River floodplain.


Marlesa A. Gray

Principal Investigator

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The completion of the Lower Ohio River Archaeological Reconnaissance was only possible through the combined efforts of a number of individuals. Special thanks are offered to the field crew--Joyce Gerber, Dennis Harrington, and Richard Stoops--for their efforts, patience, and their amazing tolerance of deer flies. Thanks are also offered to Doug Newman of the WAPORA St. Louis Office for his navigating assistance during the first days of the fieldwork.

The cooperation of Donald Ball and Charles Parrish, project monitors for the U.S. Army Corps of Engineers, Louisville District, is gratefully acknowledged. Both individuals were available for consultation, when necessary, and were willing to allow for unforeseen problems in project scheduling.

The recovered material was analyzed through the combined efforts of the Principal Investigator and the Field Director. The report was typed, through many revisions, by Missy Noppert and Elda Heil. The drafting, of the maps in the report was largely the work of Judy Wrend of WAPORA's Berwyn, Pennsylvania, Office.

I. INTRODUCTION

This report details the results of an archaeological reconnaissance undertaken by WAPORA, Inc., Cincinnati, Ohio, at the request of the U.S. Army Corps of Engineers, Louisville District, under Contract No. DACW27-80-D-0005. The reconnaissance was intended to provide 100 percent coverage of all permanent and flowage easements from Lock and Dam 52 at River Mile 938.9 (below Pittsburgh), to the considered location of the Mound City Dam at River Mile 975.0. The purpose of the survey was to locate all cultural resources, both historic and pre-historic, within the considered easement areas and to assess them in terms of potential significance as established by criteria for inclusion to the National Register of Historic Places. The nature and extent of project-related impacts was to be determined as much as possible for those sites that were directly within the easement. Recommendations were to be formulated for all sites that were located either wholly or partially within the considered easement.

The study area lies along both the Illinois and Kentucky banks of the Ohio River, within Pulaski and Massac Counties in Illinois and Ballard and McCracken Counties in Kentucky. The survey was restricted to a relatively narrow strip of river or tributary bank defined by elevation limits established by the Corps of Engineers, Louisville District, and based on river mile and expected normal upstream rise. The elevation limits are shown in Table 1.

Table 1. Elevation Limits for the Mound City Pool

<u>River Miles</u>	<u>Pool (Max.)</u>	<u>Easement (Est.)</u>
938.9 - 942.0	310.5'	312.0'
942.0 - 946.0	310.0'	312.0'
946.0 - 950.0	309.0'	311.0'
950.0 - 953.0	308.0'	310.0'
953.0 - 957.0	307.0'	309.0'
957.0 - 960.0	306.0'	308.0'
960.0 - 964.0	305.0'	307.0'
964.0 - 967.0	303.5'	305.0'
967.0 - 971.0	303.0'	305.0'
971.0 - 975.0	301.5'	303.0'

It should be noted that for the most part the river never reached the "normal pool level" of 290' mean sea level (MSL) during the reconnaissance, but remained between 292' and 295', reducing the total surveyable area and limiting the accuracy of the survey results. At one point in late August, extremely heavy rains in the upper portion of the Cumberland Plateau caused a substantial rise in river level, necessitating a delay in fieldwork while much of the easement was under water.

The fieldwork on the Lower Ohio River Navigation Pool archaeological reconnaissance was conducted between July 22 and September 4, 1980, with a team of four archaeologists and a total expenditure of 107 person-days. The survey resulted in the identification of 53 previously unrecorded archaeological sites and 5 isolated artifact finds. Of these 53 sites, 26 contained material only from the historic period, 10 contained only prehistoric material, and 14 contained both historic and prehistoric material. In addition to the previously unrecorded sites, four recorded sites near the survey tracts were visited, and additional collections were made where necessary. Of the 5 isolated artifact finds, 2 were of historic material while 3 were prehistoric. Of these sites and isolated finds, only 19 sites and no isolated artifact finds were located within the Corps of Engineers easement. The situation would have been much different if the considered navigation pool were impounding as little as 10 additional feet (3 meters) of water. This would have inundated a larger portion of the Kentucky shore floodplain and would have resulted in the flooding of numerous archaeological sites.

In addition to the fieldwork conducted by the WAPORA archaeologists, a literature search was conducted by the principal investigator and the field director. This literature search involved a number of operations including a review of listings for the National Register of Historic Places (NRHP), the Historic American Building Survey (HABS), and the Historic American Engineering Record (HAER); a review of the Kentucky state site files at Lexington; and a review of available site file information for the state of Illinois, primarily at the office of the State Historic Preservation Officer in Springfield. It should be noted that while a considerable amount of site information is on file at the Illinois Archeological Survey, access to this information for the investigations was extremely limited, consisting of a few approximate site locations and one-line descriptions. Additional literature research for the project was conducted at the Illinois State Archives, the Illinois State Historical Library, and the Illinois Museum of Natural History, all located in Springfield, Illinois. Limited additional research in Illinois was conducted at the Massac County Library in Metropolis. Historical research within the state of Kentucky was restricted to the McCracken County Public Library in Paducah, and the Library of Northern Kentucky University in Highland Heights, Kentucky. Additional historical research for the lower Ohio Valley was conducted in the Inland Waterways collection of the rare books section of the Cincinnati Public Library, Cincinnati, Ohio. While limited time did not allow the investigators to make maximum use of this collection, it could prove to be an invaluable resource for future research in the area.

II. ENVIRONMENTAL OVERVIEW

The study area begins at Lock and Dam 52, at River Mile 938.9, approximately 5 miles (8 kilometers) upstream from Metropolis, Illinois. It continues downstream to the considered location of the Mound City Dam at River Mile 975, approximately 1.5 miles (2.4 kilometers) downstream from Mound City, Illinois. The actual survey area was restricted to relatively narrow strips of land on either side of the river that are to be inundated either permanently or occasionally by the elevated navigation pool and flowage easements. The survey area is located along both the Ohio River and its tributaries and includes those areas that will become embayments of the Lower Ohio River Navigation Pool, either permanently or as easements. Low-lying sections of Barlow Bottoms, Kentucky, which may be secondarily inundated by a localized rise in the water table as a result of increased pool elevation, were also surveyed.

The entire study area is located within a physiographic province known as the Mississippi Embayment of the Gulf Coastal Plain or the Mississippi Alluvial Plain of the Coastal Plain (Fenneman 1938). The area is characteristically low-lying and gently rolling. It may be marshy with numerous small lakes and ponds (Fenneman 1938).

The majority of the survey area is covered with recent alluvium that varies in depth from only a few centimeters on the cutbanks along the Illinois shore, to depths exceeding several meters in the point bar deposits along the Kentucky riverbank and on the Mississippi River floodplain near Mound City. For the most part, this recent alluvium overlies Pleistocene sands and gravel that were deposited by glacial outwash (Butzer 1971:359; Muller and Davy 1977:3). In many areas, unconsolidated late Cretaceous or early Tertiary sediments underlay the Pleistocene deposits (Muller and Davy 1977:3), but, in some areas, the underlying Mississippian and Pennsylvanian bedrock has been exposed by erosion (Bader et al. 1977:18).

The dominant topographic feature in the project area is, of course, the Ohio River and its associated erosional and depositional features. At Lock and Dam 52, on the upstream end of the project area, the river is flowing in a northwesterly direction through a relatively straight and regular channel averaging approximately 4,200 feet (1,300 meters) in width. Three miles (4.8 kilometers) below Lock and Dam 52, just upstream of the City of Metropolis, Illinois, but below the mouth of Seven Mile Creek, the river encounters a resistant formation of conglomerate material that is probably Cretaceous in age. It is possible that another portion of this same outcrop of resistant material is responsible for the narrowing of the floodplain on the Kentucky side of the river near Metropolis Lake and the TVA Shawnee Power Plant. As a result, the channel in the Metropolis area is narrowed to less than 3,000 feet (900 meters). Additional outcrops of this conglomerate were noted in areas

along the river, but they have had little effect on channel form. Below Metropolis, the river widens to approximately 4,000 to 4,500 feet (1,200 to 1,375 meters) and continues in a northwesterly direction to near River Mile 955. At this point, the river begins a sweeping turn of nearly 90 degrees to a southwesterly heading with an arc of about 6 river miles (8 kilometers). Below River Mile 961, the river flows in a southwesterly direction, with minor lateral fluctuations, to the proposed Mound City Dam location at River Mile 975. Beyond River Mile 975, the Ohio River swings to a southeasterly heading until it reaches its confluence with the Mississippi River at River Mile 981.

Topographically, the Illinois and Kentucky portions of the survey area are highly dissimilar. On the Illinois side of the river, the upper portion of the project area (from Lock and Dam 52 to Metropolis) is located along the edge of a relatively level section of floodplain that appears to have been formed by the actions of three tributary streams (Massac Creek, Four Mile Creek, and Seven Mile Creek), rather than by the Ohio River. The majority of this landform has an elevation of 330 feet MSL or greater and is well above the proposed easement. The immediate area around the City of Metropolis has been subjected to extensive landfill and terraforming activity during the historic period. While some general statement can be made concerning the original landform at this location, the extensive amount of intentional modification at Metropolis makes any interpretation extremely difficult and of questionable accuracy. It should suffice to say that Metropolis sits on the upstream end of a bluff formation near the western edge of the Massac Creek floodplain.

Downstream from Metropolis, the Illinois side of the project area is characterized by a landform that is relatively consistent from River Mile 944 to River Mile 967. This formation can be described as a classic cutbank or concave bank formation (Leopold et al. 1964; Bates and Jackson 1980). For the purposes of consistency, the formation will be described as a cutbank during the remainder of this report.

Along this entire formation, the "floodplain" is narrow to non-existent and is situated below a steep to moderately steep riser or bluff face leading to a terrace formation. Typically, the "floodplain" in this area lacks a natural levee, though levee formations were noted in several of the wider portions of the "floodplain." Soils along the cutbank formation are fairly coarse and often contain large quantities of gravel that have eroded from glacial deposits in the bluff or have been deposited by the river during various flooding episodes. Much of this area is within the high water easement survey area but (assuming a certain amount of landform consistency through time) would only have been suitable for short term, low water (summer and fall), extractive sites such as fishing, hunting, musseling or logging camps. Exposed gravel deposits in the eroding bluff would also have been a likely source for much of the commonly used local pebble cherts. Permanent settlements in this area would probably have been situated along the top of the bluff, 30 to 40 feet (10 to 13 meters) above the frequently inundated floodplain. The bluff, while highly dissected by numerous

small first-, second-, and third-order streams, has a sufficient amount of level ground to have made modern farming practical and has been inhabited through much of the historic period. Historically, the wider sections of the "floodplain" have been farmed, and erosional cuts through the bluff have been used for access to steamboat and ferry landings along the river. The 1911-1914 U.S Army Corps of Engineers River Charts indicate large numbers of landings within the project area, but elevated river levels and constant lateral erosion have destroyed the majority of the landing remains. A comparison of the 1911-1914 navigation charts and recent topographic maps indicates that as much as 30 to 40 feet (10 to 15 meters) of lateral erosion has occurred in some areas along the river. An estimation of the decreasing age of trees as they approach the cutbank bluff tends to confirm this map observation. It is also of interest to note that at least one cemetery shown on the 1911-1914 maps does not appear on more recent maps. It is not known whether this cemetery has been eroded away or intentionally removed. It is probable that dissection of the bluff by ravine erosion and subsequent increased lateral erosion of the cutbank has been accelerated by deforestation and agricultural activity. Because of the extremely unstable nature of the "floodplain" along the base of the bluff on the Illinois side between Metropolis and Olmsted, the probability of site preservation in this area, both historic and prehistoric, is extremely low.

Beyond River Mile 967, the terrain along the Illinois shoreline changes dramatically. The cutbank formation that has been established further upriver by the Ohio River is replaced by a level floodplain that appears to have been formed primarily by a meander of the Mississippi River. This formation remains fairly consistent from just below Olmsted to the mouth of the Ohio River. Depositional patterns in this area are probably extremely complex because of independent flooding episodes of the Ohio and the Mississippi Rivers, as well as periods when both rivers are in flood. Bank profiles in this area are variable, with erosion producing some steep cuts and alluvial deposition forming areas of gentler slope. While this area is now and has always been subject to intermittent flooding, it would have been attractive for habitation during the prehistoric period because of abundant natural resources and has been inhabited historically since the early nineteenth century. Favorable conditions for habitation and a depositional regime indicate a high potential for the occurrence of buried cultural resources in this portion of the project area.

The Kentucky portion of the survey area is markedly different from the Illinois shoreline. Throughout its entire length, the Kentucky shoreline is a depositional formation that, while much larger than is normally considered, may be described as a convex bank or a point bar deposit. For the remainder of this report, the formation on the Kentucky side will be called a point bar deposit. Bates and Jackson in their Glossary of Geology define a point bar deposit as "a deposit consisting of a series of alternating point bars and intervening troughs" (1980:486). A point bar is defined in the same source as "one of a

series of low, arcuate ridges of sand and gravel developed on the inside of a growing meander by the slow addition of individual accretions accompanying migration of the channel to the outer bank" (Plate 1, upper left). For the most part, "natural levee" or "levee remnant" will be used rather than "point bar," and the intervening troughs will be called "backswamp depressions" or "levee flank depressions" (Plate 1, upper right). It should be noted that while the Kentucky portion of the project area is a depositional formation, some localized areas of erosion occur as evidenced by exposed root systems on trees and erosional exposures of backswamp deposits along the river bank. Examination of exposed root systems on many of the willow trees along the shoreline indicate that fluvial processes may change from erosion to deposition and back to erosion again within periods of less than 30 years. Some species of willows have the ability to grow roots from buried branches or trunks, and branches from exposed roots. Both processes have been observed on trees less than 30 years old.

The floodplain in this portion of the project area is situated an average of 20 to 30 feet (6 to 12 meters) above the "normal" pool level, but the survey was restricted to a relatively narrow band of shoreline, the sloping banks of drainage features, and the edges of potentially impacted backswamp depressions. Much of the area is poorly drained, and the backswamp depressions are annually flooded, with water often covering the entire floodplain (Cummins, personal communication). While much of this area would have been unsuitable for year-round habitation, seasonal exploitation of the river, streams, levee flank lakes, swamps, and surrounding areas would undoubtedly have provided large quantities of food for local inhabitants.

The poor drainage and frequent flooding of the area, especially in the vicinity of Barlow Bottoms, has made much of the floodplain unsuitable for historic period habitation or agriculture (Plate 1, lower left). Both settlement and agriculture have been restricted to the narrow, relatively well-drained levee remnants, with the surrounding swamps and low-lying areas remaining virtually untouched. Recent large-scale drainage projects have opened some of this land to farming, and ongoing drainage projects are rapidly changing the nature of the Barlow Bottoms area.

Vegetation in the study area varies considerably, depending primarily on the drainage of a particular area. Many of the poorly drained and swampy areas are dominated by stands of bald cypress (*Taxodium distichum*) and tupelo (*Nyssa* sp.) (Seegert, personal communication). Areas that are low-lying along the river and subject to periodic inundation are predominantly covered by black willow (*Salix nigra*), while stabilizing banks and sandbars are often covered by sandbar willow (*Salix interior*). Better drained, but still moist, areas that are more stable are usually dominated by the eastern cottonwood (*Populus deltoides*), although some swamp cottonwood (*Populus heterophylla*) is present. Well-drained areas and uplands often contain walnuts (*Juglans* sp.) and hickories (*Carya* sp.), along with a wide variety of oaks that include white oak (*Quercus alba*), post oak (*Quercus stellata*), red oak (*Quercus rubra*), and black oak (*Quercus velutina*) (Brockman 1968). The oaks and hickories provide ample mast for human consumption and would attract both deer and squirrel.



PLATE 1.

Upper Left: Sloping bank on Kentucky point bar deposit near River Mile 955. Light colored soil in foreground is recent alluvium more than 30 cm in depth. View is to the south.

Upper Right: Levee flank depression on Kentucky shore two miles upstream of Shawnee Stream Plant. View is to the northwest.

Lower Left: Levee flank depression swamp (Long Pond) on Barlow Bottoms, Kentucky. Note stands of bald cypress and willow. View is to the northwest.



Commonly occurring fruit trees in the area include black cherry (Prunus serotina), common chokecherry (Prunus virginiana), American plum (Prunus americana), and chickasaw plum (Prunus angustifolia) (Brockman 1968; Seegert n.d.). In addition to the major types of trees listed above, the project study area contains a wide variety of lesser trees; vines, such as honeysuckle and trumpet vine; several species of berries; a number of wild grasses with edible seeds; edible greens; and a variety of edible tuberous root plants. This area would have been attractive to a wide range of animal species, including humans, both as primary and secondary consumers.

During prehistory and the early portions of the historic period, the study area probably supported a greater number of animal species than those that are now present. Destruction of habitat and over-hunting have removed many species from the area, but archaeological remains and historic records help to provide at least a partial list of species that were available prehistorically and during the early historic period. The following lists have been derived from a number of sources and represent only major species present. Known mammals in the area included: bison (Bison bison), elk (Cervus canadensis), whitetail deer (Odocoileus virginianus), wolf (Canis lupus), mountain lion (Felis concolor), black bear (Ursus americanus), opossum (Didelphis marsupialis), raccoon (Procyon lotor), mink (Mustela vison), longtail weasel (Mustela frenata), river otter (Lutra canadensis), spotted skunk (Spilogale putorius), striped skunk (Mephitis mephitis), red fox (Vulpes fulva), gray fox (Urocyon cinereoargenteus), bobcat (Lynx rufus), woodchuck (Marmota monax), eastern gray and fox squirrels (Sciurus carolinensis and niger), red squirrel (Tamiasciurus hudsonicus), southern flying squirrel (Glaucomys volans), beaver (Castor canadensis), muskrat (Ondatra zibethica), and eastern cottontail and swamp rabbits (Sylvilagus floridanus and aquaticus) (Olsen 1964; Burt and Grossenheider 1976; Seegert n.d.).

As well as having an abundance of mammalian resources, the location of the project area under the Mississippi flyway ensured an abundant, if seasonal, resource in terms of migratory waterfowl. A partial listing of these waterfowl includes: Canada goose (Branta canadensis); blue and snow goose (Chen caerulescens and hyperborea); mallard, pintail, and black duck (Anas platyrhynchos, acuta, and rubripes); teal (Anas sp.); redhead, canvasback, and ringnecked duck (Aythya americana, valisineria, and collaris); and bufflehead (Bucephala albeola). In addition to the above-listed waterfowl, birds that were exploited either as a food source or for decorative feathers included: turkey (Meleagris gallopavo), bobwhite (Colinus virginianus), turkey vulture (Cathartes aura), bald eagle (Haliaeetus leucocephalus), golden eagle (Aquila chrysaetos), red-tailed hawk (Buteo jamaicensis), red-shouldered hawk (Buteo lineatus), Cooper's hawk (Accipiter cooperii), pileated woodpecker (Dryocopus pileatus), and ivory-billed woodpecker (Campephilus principalis) (Robbins et al. 1966).

Faunal resources available from the Ohio River, the levee flank lakes, and the backwater swamps would have included: bowfin (Amia calva),

alligator and longnose gar (Lepisosteus spatula and osseus), channel catfish (Ictalurus punctatus), snapping turtle (Chelydra serpentina), mud turtle (Kinosternon subrubrum), and bullfrogs (Rana catesbeiana) (Olsen 1968). Freshwater mussels have been exploited by both prehistoric and historic inhabitants of the area as a food source and for shells and pearls. No attempt will be made to list the prehistorically utilized mussels, but historic utilization has included the pigtoe (Pleurobema cordatum), white pimpleback (Quadrula pustolosa), washboard (Megaloniaias gigantea), and mucket (Actinoniaias carinata) (Parmalee 1967:2-4).

Because of its mild climate, the area is described as either humid subtropical or humid continental (Oliver 1972), with warm, moist summers and cool, wet winters. The average temperature for the area is 57-58°F (13.8-14.5°C). The area is suitable for a wide variety of naturally occurring vegetative and faunal species, and the plentiful precipitation, 40 to 45 inches (102 to 114 cm) per year, coupled with a long growing season, 200 to 210 days, make it possible to raise most modern crops. Rich soils, replenished annually by the flooding rivers, and the plentiful amount of water have made it possible to raise almost all commonly grown crops, including corn, soybeans, milo, cotton, tobacco, tomatoes, wheat, and pasture crops. Today, the primary crops in the area are corn and soybeans for use as cattle feed, although some milo is also produced as poultry food. Much of the forest cover has been removed and burned as part of the preparation for agricultural fields, although some areas are now being managed and selectively harvested for their increasingly valuable timber resources.

With its abundant natural resources, mild climate, and favorable location near the confluence of two of the largest rivers in North America, the general vicinity of the considered Lower Ohio River Navigation Pool would have provided an excellent location for both historic and prehistoric exploitation and habitation. Most habitation in the immediate vicinity of the river would have been, of necessity, seasonal until recent times when adequate protection against flooding has been developed by the construction of levees and flood control dams on tributaries of the Ohio and Mississippi Rivers. Even so, the Ohio and Mississippi Rivers will periodically flood, causing tremendous amounts of damage to property, livestock, and crops. Ironically, the same flooding that causes such monumental damage also serves to bury and protect many sites, both historic and prehistoric, along the floodplain of the river.

III. PREHISTORIC OVERVIEW OF THE LOWER OHIO VALLEY

The following ~~brief overview~~ has been developed from a number of sources and is intended, as much as possible, to eliminate inconsistencies in the existing data and to provide the reader with terminology that will not differ more than necessary between the states of Illinois and Kentucky. State line faults have been recognized in structural geology for many years and, in recent years, a counterpart has been recognized in archaeology. Unfortunately, few serious attempts have been made to rectify the situation in terms of developing regional terminologies and chronologies for archaeology. In order not to create a cloud of confusion that would hinder the utility of this report, no attempt will be made to develop such a regional perspective for the Lower Ohio Valley at this time. To simplify matters as much as possible, only broad cultural trends and major artifactual types will be discussed here. This overview is not an attempt to create yet another cultural sequence for the Lower Ohio Valley, but should rather be viewed as a synthesis of the existing information.

Paleo-Indian Period

The earliest known inhabitants of the Ohio Valley are called the Paleo-Indians. Arriving in the area sometime prior to 8000 B.C., these people left few traces of their occupation, other than scattered surface finds, and the period is probably the least well understood in North American prehistory. Subsistence during this period was probably based on the hunting of now-extinct megafauna, as can be demonstrated by kill sites in the West. Along with this rather specialized hunting pattern, there was also presumed to be at least a limited dependence on vegetal foods. Hunting of large herd animals such as mammoth, mastodon, and bison would have necessitated a nomadic settlement pattern with small isolated campsites housing what may have been extended family units. The climate during this period would have been cold and wet and is, at times, referred to as "boreal" (Bader *et al.* 1977:39). Towards the end of the Paleo-Indian period, a shift in climatic conditions towards warmer and drier conditions was accompanied by a change in material culture from the fluted point (Clovis-like) tradition, to a "transitional" complex referred to as Dalton-Meserve (Butler *et al.* 1979:11). The transitional Dalton-Meserve complex is represented in the Big Muddy and Cache River drainages in Southern Illinois (*ibid*), but not from nearby areas of Kentucky. It is more likely that this absence is an archaeological collecting or identification bias, rather than a cultural absence.

Surface finds from this period are reported from upland settings and first terraces of major streams, but no confirmed *in situ* finds have been made in the area. Young (1910) reported stone tools found in association with mastodon remains in Jefferson County, Kentucky, but the loss of both the mastodon and the tools make an assessment of this find impossible.

Early Archaic Period

The Early Archaic Period is generally assigned dates ranging from 8000 to 6000 B.C. This cultural period corresponds closely to a climatic shift known as the anathermal, during which time a change was occurring from the cold, wet boreal conditions of the Paleo-Indian period to the warmer altithermal conditions that characterize the remainder of the Archaic Period (Bader et al. 1977:39). During this period, an adaptation was occurring as groups were changing from a subsistence based on the hunting of megafauna, which were becoming extinct during the climatic shift, to the hunting of presently existing species. Settlement patterns are not well known for this period, but they probably would have involved small, scattered hunting camps, either open or sheltered, that were occupied for short periods of time. Sites from this period are located in most topographic locales, indicating that the people were adapting to a wider range of ecological niches. Diagnostic artifacts for this period include the Hardin Barbed, Thebes, and Plevna projectile point types (Butler et al. 1979:12).

Middle Archaic Period

During this period, from 6000 to 3000 B.C., the population size began to increase considerably. Subsistence systems were still shifting to the exploitation of a wider range of available natural resources, both floral and faunal. Major site types for this period are still hunting or collecting stations, but they show a marked increase in size and number, with some showing a marked adaptation to specific local environments (Fowler 1959:54-55). This adaptation is most noticeable east of the study area where large shell mounds were accumulated along the Green River (Webb 1940). It is also during this period that ground stone tools were first made, in the form of celts, grooved axes, bannerstones (atlatl weights), and plummets (Butler et al. 1979:12). In addition to the above-mentioned groundstone objects, side-notched and stemmed projectile points, such as the Faulkner cluster, are considered to be characteristic of the Middle Archaic Period (Fowler 1959:36-37).

Late Archaic Period

During the Late Archaic Period, dating from to 1000 B.C., there was a continuation and a final climax in the adaptation to, and exploitation of, the natural environment. Caldwell (1958), in a somewhat different context, has termed this exploitative peak as "Primary Forest Efficiency." Yarnell (1976:269) feels that there is also evidence for the beginning of agriculture during the latter portion of this period. It was during the Late Archaic Period that mussel collecting appears to have become a major subsistence activity along the Lower Ohio River, although no shell mounds were identified in the immediate vicinity of the project area. Crude ceramics begin to appear in some archaeological contexts dating to the latter part of this period. Their appearance may indicate an increasing trend towards sedentary settlement patterns, possibly with large summer base camps located along major streams and fall and winter camps in the uplands to exploit

the mast-dependent fauna. No specific projectile point types have been identified within a firm context for the Late Archaic, but most authors suggest a series of stemmed and side-notched points similar to Middle Archaic types were being used (Muller and Davy 1977:18; DiFlasi and Sudhoff 1978:12).

Early Woodland Period

The Early Woodland Period, from 1000 B.C. to 300 B.C., is not well defined and appears to be poorly understood in the Lower Ohio Valley. The beginning of the Early Woodland is usually equated with the large-scale manufacture of ceramics such as the Baumer series of crude, crushed rock-tempered, cord- or fabric-marked ceramics. These ceramics are similar to some that have been found in terminal Archaic manifestations further south, a fact that is further complicated by similarities in projectile point types between the Late Archaic and the Early Woodland Periods. Unlike the Adena Culture located further upstream along the Ohio, there is no evidence of Early Woodland earthworks in the Lower Ohio River Valley. No firm evidence for intensive agriculture is noted during the Early Woodland (Yarnell 1976:269), but the possible domestication of plants such as goosefoot (Chenopodium sp.), sumpweed (Iva sp.), and sunflowers (Helianthus sp.) may have occurred (Struever 1964; Yarnell 1976).

Middle Woodland Period

The Middle Woodland Period, 300 B.C. to A.D. 500, shows marked changes from the Early Woodland. These changes include the development of an extensive redistribution and trade network, an increased agricultural efficiency along with population growth and increased sedentism, and the development or elaboration of extensive ceremonial systems (Butler et al. 1979:13). While the Lower Ohio River Valley is located on the edge of what has been titled the "Hopewell Interaction Sphere" (Struever 1964), Hopewell influence has not been observed to any great extent in the area, and burial mounds are almost totally absent, with noted exceptions near the mouth of the Saline River, north of the project area, and some possible mound occurrences near the Ohio-Mississippi confluence (Butler et al. 1980:14). Bader et al. (1977:58) suggest that Middle Woodland cultural manifestations in the project area should be considered as "Crab Orchard." This suggestion agrees with both Butler et al. (1979:14) and Muller and (1977:22). Projectile point types for the Middle Woodland period are well known in the survey area, but may be similar to the Steubenville (Merino 1968), Snyders (Scully 1951), or Lowe (Winters 1967) types.

Late Woodland Period

The Late Woodland Period, from A.D. 500 to A.D. 1000, is characterized in the project area, as in most of eastern North America, as a

decline from the cultural florescence of the Middle Woodland Hopewell Tradition. In areas where mound building had been prevalent, there occurred a cessation of mound construction, although intrusive mound burials continued to take place. There also appeared to be a general collapse of the large and complicated Middle Woodland trading systems. While some mounds were built in outlying areas, their functions appear to have been as general cemeteries, rather than as status tombs. Historically, there appears to be some difficulty in separating the riverine and inland manifestations of Late Woodland cultures (Cole *et al.* 1951; Maxwell 1951), but this is of minor importance when dealing with an entirely riverine environment such as the study area. Little is known of Late Woodland settlement patterns in the study area, but floodplains and first terraces of major streams are common site locales in areas to the north and east. Diagnostic material for the Late Woodland Period consists primarily of ceramics with tempering of grog, grit, or sand. These ceramics are distinguishable from their predecessors mainly on the basis of thinness and a more compact paste (Butler *et al.* 1979:37). Other "diagnostics" include small triangular projectile points, pottery discs, and discoidals (DiBlasi and Sudhoff 1978:18). Unfortunately, this artifact assemblage, with the exception of the ceramic tempering, is quite similar to that of the later Mississippian Period.

Mississippian Period

A great deal of ambiguity and inconsistency exists concerning the beginning and the end of the Mississippian Period, possibly because of disagreement within the archaeological profession on what constitutes Mississippian culture. These inconsistencies, while not great, point up what would appear to be a general lack of communication between researchers in the area. Muller and Davy's dates for the Mississippian Period in the Lower Ohio Valley in Illinois are A.D. 900 ca. A.D. 1620 (1977:14). Bader *et al.* (1977:40) agree quite closely with this at A.D. 900 to 1600. Other dates are somewhat more at variance. Butler *et al.* (1979:15) give dates of A.D. 900 to 1500 for the Smithland Pool area, and DiBlasi and Sudhoff (1978:18) give dates of A.D. 1200 to 1600 for the area immediately across the river. This author feels that a cultural tradition as important and complex as the Mississippian would hardly have taken 400 years to cross even a large river such as the Ohio, and is not likely to have lingered for 100 years longer on one side of the river for similar reasons. In the Illinois portion of the project area, Mississippian culture is often referred to as the Cairo Lowlands Phase (Muller and Davy 1977:27), while in Kentucky, it is referred to as the Tennessee-Cumberland Phase (Bader *et al.* 1977:65). The only points of agreement seem to be on the existence of large permanent villages, shell-tempered ceramics (with a bewildering array of inconsistently named design elements), small triangular projectile points, and the construction of truncated pyramidal mounds. Agriculture was well developed during this period, with maize (*Zea mays*) and beans (*Phaseolus vulgaris*) being used as staple crops. Examination of faunal remains indicates that hunting and fishing still played important roles in the subsistence patterns of the area (Bader *et al.* 1977:65).

Historic al Period

Historically, the Lower Ohio River Valley seems to have been lacking in permanent aboriginal settlements (Bader *et al.* 1977:68; Muller and Davy 1977:27; Bauxar 1978:594). The area, while at least nominally claimed by the Shawnee, was probably used as a hunting and fishing area that was considered "neutral" and, as indicated by Swanton (1946:5), may have intermittently been occupied by the Shawnee, Michigamea, Kaskinampo, and Yuchi Indian groups. The only recorded historic Indian settlements in the project area are associated with Fort Massac at present-day Metropolis (Lathrop and Gubisich 1970). It is likely that these villages were of mixed tribal composition and would have functioned as trading centers. While no permanent settlements or large numbers of Indians were present in the area, occasional raids occurred (Muller and Davy 1977:31). These Indian raids were often bloody and cruel (Baskin 1883:536-537) as rage and frustration were vented on the white settlers. The "removal" of Indian population that occurred throughout much of the eastern United States does not appear to have been necessary in or near the project area. By 1800, most of the Indians from the area had moved westward across the Mississippi.

IV. HISTORIC OVERVIEW OF THE LOWER OHIO VALLEY

This brief historic overview will focus primarily on the development of the Lower Ohio River, its banks, and immediate surroundings. For reasons described in the environmental section of this report, historic settlement along the river was restricted to certain protected or elevated areas. Only one naturally suitable site is located near the project area; this is the present-day location of Metropolis, Illinois, and Fort Massac. Other towns such as Joppa, Olmsted, and Mound City are located near the river, but are either on the "bluff" (Joppa, Olmsted) or behind protective levees (Mound City). It should be noted that all of the towns mentioned above are located on the Illinois bank of the river. The Kentucky portion of the project area, for reasons discussed previously, is very poorly suited to development and has been restricted primarily to agricultural use.

The first recorded Europeans in the Lower Ohio Valley were the Frenchmen Louis Jolliet and Father Marquette who "discovered" Illinois in the summer of 1673 while exploring the Mississippi River and trying to locate a route to the Orient (Wilson and Carlock 1977:29). Page (1900:12) states that while the French explorer and missionary noted the presence of the Ohio River, it was dismissed as an "insignificant" stream. This is an amazing fact when one considers that, at their confluence, the Ohio is a much more impressive river than the Mississippi. The first European to do extensive exploration on the Ohio River was also a Frenchman, Robert Cavelier, Sieur de La Salle, who with Henri de Tonti, an Italian soldier of fortune, explored much of the Midwest during the 1680's (Howard 1972: 30-34). The domination of the upper Ohio Valley by the Iroquois confederation had prevented the English colonists and explorers from entering the area during the early eighteenth century, thus allowing the French to develop a firm base of trade with the Indians.

The first French attempt to exploit the Ohio River Valley began in 1703 when Charles Juchereau de St. Denys established a tannery for bison hides on a hill overlooking the Ohio River near Mile 957 (Wilson and Carlock 1977:30). No trace of this site, now known as the VaBache site, was observed during the survey, and the site location was omitted in the information the researchers were allowed from the Illinois site records. Unfortunately, the tannery was destined to fail shortly, either because of disease or an Indian attack, and the French were slow to follow up on their advantage by creating new settlements. By the 1740's, the Ohio Valley was beginning to feel the pressure of British expansion from the east, and with the French and Indian War (1755-63), the French felt the need to fortify the lower regions of the valley. Wilson and Carlock (1977:31) state that Fort Massac, or Fort de L'Ascension, was built at present day Metropolis in 1757. Page (1900:32), however, states that Fort Massac was built in November of 1758 after Monsieur Massac was forced to flee Fort Duquesne by the British General Forbes. The location for Fort Massac was evidently chosen to protect a nearby mission and trading post that had been established ca. 1700 (Page 1900:15).

With the British victory and the end of the French and Indian War in 1763, the Ohio Valley should have been opened to settlement by English colonists. However, the Proclamation of 1763 had closed the area to colonization to protect the valuable fur trade and to maintain good relations with the Indians. As was typical in other parts of the continent, colonists ignored the proclamation and began to filter into the area through Kentucky and along the Ohio River.

After the outbreak of the American Revolution in 1775, George Rogers Clark of Kentucky convinced the Virginia governor that a campaign against the British in Western Kentucky and Southern Illinois was essential. It was during this campaign that Clark rebuilt Fort Massac, which had been burned by the Indians shortly after abandonment by the French.

With the close of the Revolutionary War in 1778, settlement of the Lower Ohio Valley began in earnest. By 1780, flatboats were common on the Ohio River, transporting settlers and their goods to the West. Following the Louisiana Purchase in 1803, the Mississippi River was no longer the western border of the United States, and the flow of traffic along the Ohio River became a torrent. Unfortunately, the increase in river traffic created a new problem--river pirates--in the sparsely settled and barely governed area. By 1797, it had become necessary to build a fort known as Cantonment Wilkerson, near River Mile 958, to protect the settlers. The investigators were unable to obtain an exact location for the fort, which is located on the Illinois bank of the river, and most historical documentation is vague (Wilson and Carlock 1977:32).

By the opening decade of the nineteenth century, the newly invented steamboat was making rapid movement of large cargos possible both up and down the river. Within a few years of the closing of the War of 1812, towns were beginning to appear along the Illinois shore of the river to take advantage of improved market access (Wilson and Carlock 1977:32). Wilson and Carlock (*ibid*) state that these ports (Mound City, Caledonia, Grand Chain, and Metropolis) prospered from 1812 to the Civil War. Perrin, however, feels that the area of Mound City was abandoned from 1812 to 1836 because of an Indian massacre, and makes no mention of either Grand Chain or Caledonia being present until 1844, when Caledonia became the county seat of Pulaski County (1883:514, 536-537). A few landings are shown on the Kentucky shore during this period, but they do not appear to be associated with any settlements and were probably for the shipping of agricultural products or timber.

Only two "major" settlements fall within the study area. These are Metropolis, at the upper end of the proposed impoundment, and Mound City at the lower end. The City of Metropolis was the earlier of the two towns, having apparently grown around Fort Massac in the late 1700's. A ferry was in operation at Metropolis ca. 1800, and was operated either by winch or by pole until it was converted to steam in 1874 (Page 1900: 130). Metropolis, and her Kentucky sister city Paducah, located upstream of the project area, served as the focal points for shipping and industry in the area. The shift from an agricultural to industrial community may

be reflected in the population figures for the area, although Page (1900:40-41) leaves some rather large gaps in these statistics. He states that, in 1843, Massac County contained approximately 1,500 people, mostly immigrants from the southern states and, presumably, farmers. By 1890, the area had a population of 11,313 and, by 1900, 15,084. The larger population of the latter part of the century consisted primarily of Scots and Germans who had come into the area from the northeast and east. Of these groups, the Germans were said to control the wealth and property, while the Scots practiced most of the professional occupations. Page (1900) makes no mention of the effect of the Civil War on Metropolis, but it is likely that some of the industries mentioned in the 1900 inventory had their start during this period. Among those industries mentioned (Page 1900:130-132) are a cooperage, employing 40 coopers; a barrel head factory; a spoke and hub factory; a plow handle factory; a large fruit box and basket factory; at least two sawmills, one of which was producing decorative trim; and a ship way for the construction of steamboats. With all of these activities, which required large quantities of wood, it is probable that lumbering was a major activity in the area. Evidence that at least some of the lumber was transported downstream on the river is provided by logging inclines shown on historic maps (especially in the area of Mound City) and occasional finds of log raft chain pins along the shore.

With the resettlement of the Mound City area in 1836, development of the lowland began in earnest. In 1843, with the formation of Pulaski County, the population began a steady rise. By 1860, the population of the county had risen from an estimated 1,500 to almost 4,000 (Perrin 1883:516). At the same time that Mound City was being laid out with its streets parallel to the Ohio River, another town, Emporium City, was being established with intersecting streets on a north-south axis. Emporium City was only one of a series of rather questionable dealings that involved the Emporium Company. Most of these questionable activities concerned the sale of large amounts of property for development before the land had been acquired. One of the early legitimate projects undertaken by the Emporium Company was the Mound City Hotel. Erected in 1856, the three-story hotel was shipped partially assembled from Cincinnati, Ohio, and was in operation 60 days after the beginning of construction (Perrin 1883:544).

The most notable of the projects undertaken by the Emporium Company was the construction of the marine ways. These large ship ways were built at Mound City between 1857 and 1859. The machinery used at the ways was locally produced by the Mound City Foundry (Perrin 1883:544). In 1860, Hamilton, Collier and Company of Louisville, Kentucky, took possession of the Mound City marine ways, and three Eads-class ironclads, the Carondelet, the Mound City, and the Cincinnati, were built there between 1862 and 1863.

In September of 1861, shortly after the beginning of the Civil War, Kentucky shed its neutrality and cast its lot with the Union. Federal troops, which had been stationed at Cairo, Illinois, under the command of

of a then-little known general, U.S. Grant, began a southward march. In January, Grant's troops, along with a squadron of gunboats from the inland fleet, began to advance along the Ohio and up the Tennessee River to Fort Henry. This movement took Grant and his men along the floodplain on the Kentucky side of the river, passing over parts of the project area. The fall of Fort Henry was accomplished without the use of Grant's infantry, but Fort Donnelson, on the Cumberland River, was more difficult and prepared Grant and his men for the bloody Battle of Shiloh on April 6 and 7, 1862 (Catton 1960:114-115). Many of the wounded from this battle were returned by riverboat to Mound City where a hospital was set up in a converted warehouse. The hospital used for the wounded has been mostly destroyed by fire in this century and is outside of the project area.

On July 1, 1863, the Union Navy took possession of the marine ways and adjoining rail depot for use by the Western fleet (Perrin 1883:549). The marine ways at Mound City did not return to private ownership until 1874, and they continued in operation until after 1935. Examination of the remains at the ways suggests that they had been converted to barge construction, and have been "modernized" at least once since construction. Much of the heavy machinery from the ways is still in place and may present a unique study opportunity (Plate 2 upper left).

In 1866, the first of the levees at Mound City was begun. While the levee was high enough to prevent overflow in the 1867 flood, sections of the levee had not had time to settle and the river broke through to flood the town. After repairs, the levee held in the floods during 1882 and 1883 (Perrin 1883:555). While the levees around Mound City have been raised and extended along the river during the twentieth century, they still represent an excellent example of early historic earthworks.

During the last quarter of the nineteenth century, an industry developed that was to have a profound impact on the Lower Ohio Valley. This industry, the manufacture of shell buttons, was begun by a German immigrant named J.F. Boepple (Parmalee 1967:1). This industry involves the taking of certain species of mussel from the river, usually with a flat-bottomed Jon boat and a crowfoot dredge dragged along the bottom, although sometimes mussels were taken with a rake dredge or by hand (Starrett 1971:281). The species preference was for shells with a pearly nacre such as the pimplebacks, yellow sand shell, banana-shell, pigtoe, blue-point, and mucket. After collection, the mussels were steamed open in a shallow "cooker," and the soft parts inspected for pearls. The shells were sorted by size and species, then sold to buyers or direct to the factory. After arrival at the factory, the shells were again sorted, and round "blanks" were removed by a cylindrical drill or hole saw (Parmalee 1967:4). Numerous small piles of drilled shells were noted at various spots along the river, and the sloping bank below Metropolis, Illinois, is littered with thousands of drilled shells. There is no mention of a button factory having been located in Metropolis, but one may have occurred there between 1914 and the demise of the industry following World War II. Parmalee (1967:4) states that scrap shell from the drilling process was at times used as road fill, and it is possible that the shell at Metropolis was placed there from elsewhere to stabilize the banks. In the 1960's, a new use for mussel shells created a resurgence in the collecting portion of the industry. The shells of some species were found to produce excellent

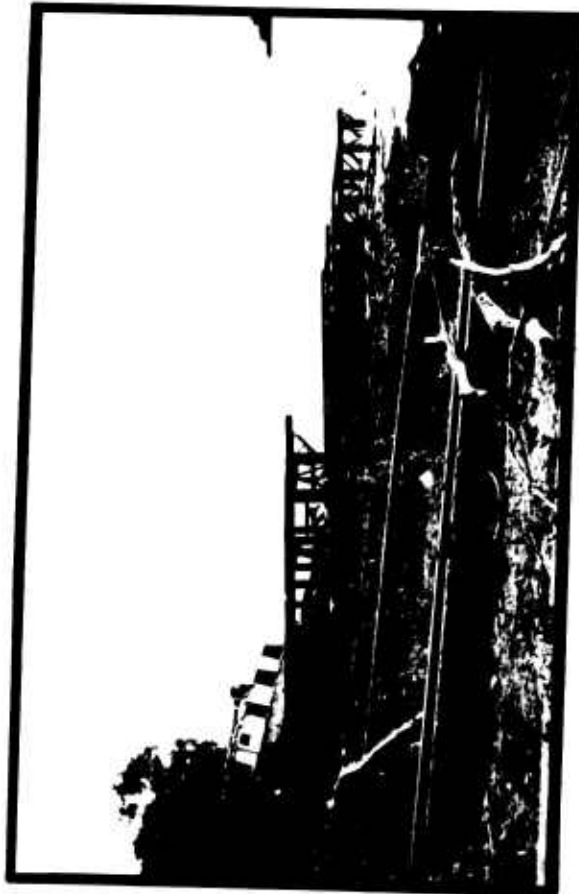


PLATE 2.

Upper Left: Tracks for marine ways at the Mound City Shipyard. Framework in water is a partially submerged carriage. View is to the north.

Upper Right: Barge to rail transfer facility at Joppa (W-595-25). View is to the north.

Lower Left: Rail to barge coal loading facility at W-595-25. View is to the south.

"seeds" for the cultured pearl industry of Japan (Parmalee 1967:4). The crowfoot or goat's-foot hooks and remains of "Jon boats" are common occurrences along the banks of the Ohio River. While "musslers" camps were observed in operation along the river, no abandoned camps were recorded.

One of the most common types of historic sites along the river proper is the boat landings. Historical sources and maps indicate many landings, and the locations of some will be shown on the site location maps. While many of these landings were no more than a road to a sheltered spot along the river or a simple wooden pier, some such as the rail-barge transfer facility at Joppa, have left substantial remains. The Joppa facility (W-595-25) includes two major elements. The first element consists of two railroad spurs that run into the river to allow barges to pull along the side and unload (Plate 2 upper right). The second element is a trestle that spans an inlet, allowing barges to be floated under the tracks so that coal can be loaded directly from rail to barge (Plate 2 lower left). Modern counterparts to these operations can be found at the large power plants along the river, and at several barge loading facilities.

The reader has probably noted an almost total lack of reference to the Kentucky shore of the Ohio River in this overview. This lack of reference is not an oversight, but is the result of the absence of major historic activity, other than that related to agriculture, within the study area. Agriculture and logging, while important activities, are not the types of activities that attract the attention of historians. Also, many areas, such as Barlow Bottoms, became areas of major agricultural activity only during the middle of this century. The 1911-1914 U.S. Army Corps of Engineers navigation charts allow an interesting study of changing land use patterns in the area, with progressively more land drained for agriculture through time. It may also be that further study will allow the recently recorded historic sites to be associated with structures shown on the maps.

During the first quarter of the twentieth century, the U.S. Army Corps of Engineers undertook a series of projects that were to have a lasting effect on the Ohio River Valley. These projects, the construction of a series of navigation locks and dams to aid in low-water navigation, were to make year-round navigation possible on the Ohio River from Cairo to Pittsburgh. This would not only change the amount and nature of the cargo shipped on the river, but would allow for changes in the types of vessels and associated loading or unloading facilities. Construction on the dams was begun around 1918 and was mostly completed by the mid-1920's. Lock and Dam 52 will not be affected by the considered construction, but Lock and Dam 53 will be inundated along with the temporary lock currently under construction beside it.

Since the 1920's, major construction in or near the survey areas has been limited to power plant facilities, barge loading and unloading facilities, bridges, power line platforms, and boatramps. These resources are symbolic of the continued importance of the Ohio River to the Western Kentucky and Southern Illinois area.

V. PREHISTORIC ARTIFACT TYPOLOGY

The following artifact typology has been developed and refined by this author over several years and from numerous sources, most notably Bordes (1968) and Crabtree (1972). The classification used is one of "broad functional" types as established through gross morphological characteristics. Functional types, rather than specific artifact names, are used to aid in the overall determination of site or intrasite function. Using these functional types and groups, it has been possible to tentatively establish the function for a number of sites (White *et al.* 1980). The intent is not to redefine any given tool type, but to provide the reader with firm definitions for the artifact types used in the inventories. It should be noted that one of these "functional" types may contain more than one specific type of artifact. Because the function of these artifacts is assumed to be similar, they are assigned to a single type.

Projectile Point/Knife

Any of a variety of stone or bone tools that has been sharpened and prepared for hafting for the primary function of piercing either human or animal bodies. These tools may also have been used for cutting as a secondary function. Diagnostic projectile points are listed for each cultural period within the prehistoric overview.

Thin Biface

A proportionately thin, bifacially worked stone tool or fragment of a tool, that may be a finished implement or one of the final stages of reduction in a manufacturing process. A thin biface fragment may be a fragment of a tool that would be classified as a projectile point/knife if the complete specimen were recovered.

Uniface Scraper

A unifacially worked stone tool with a steep retouch, used to remove small amounts of excess material from hides, wood, or bone. This type of tool characteristically has short, steep usage scars.

End Scraper

A scraper, either bifacially or unifacially worked, that is made on the short axis of a blade or a reworked projectile point/knife. These tools are quite often reworked, broken tools, although they may be of primary manufacture.

Uniface Tools

Unifacially worked stone tools that may be relatively large and fashioned on either blades or spalls. These are differentiated from uniface scrapers in the retouch angle and wear patterns. Many examples of this class probably functioned as knives.

Retouched Flakes

Any flake that shows deliberate reworking, either bifacially or unifacially, in an attempt to strengthen the edge.

Utilized Flakes

Flakes that show retouch resulting from use rather than from manufacturer's design.

Chopper

A massive lithic tool with bifacial or unifacial retouch along one, usually narrow, end. May be based on a cobble or block of parent stone.

Hoe

A relatively large flat tool of either stone or bone, rectangular or oval in shape, that is used for loosening the soil and removing weeds in agricultural fields, or the extraction of wild plants. If stone, these tools may be made from slate, chert, shale, or limestone; may exhibit battering along one or more edges; and may show a silicone polish on one or more surface.

Mano

A hand held grinding stone that exhibits one or more wear facets. Normally used in conjunction with a metate.

Metate

A stationary or portable grinding stone, usually massive, with a depressed work area sometimes occurring on two sides. Counterpart to mano.

Nutting Stone

A generally massive stone with one or more small circular depressions that may have served as a base for breaking open nuts, or the grinding or crushing of small quantities of material.

Ceramics

Vessels or vessel fragments of fired clay with or without the addition of an aplastic tempering agent such as sand, crushed rock, plant fibers, shell, burned bone, or grog. May be plain or surface decorated. Representative ceramic types are presented in the pre-historic overview.

Stone Vessels

Vessels or vessel fragments, usually carved from steatite, sandstone or other "soft" stone. While stone vessels are generally considered to be the precursors of ceramics, their presence has been documented as late as the Mississippian period (Moore 1905).

Fire Cracked Rock

Any stone that shows thermal damage or alteration such as cracking, spalling or discoloration.

Adze

A beveled bifacial stone tool usually in the shape of a long, narrow rectangle. It is assumed that this tool was hafted at a right angle to a handle and used for woodworking.

Axe

A symmetrical, bifacially worked stone tool that is basically rectangular or oval in shape. This tool may be chipped, ground, or a combination of the two, and may be fully or partially grooved for hafting.

Drill

A chipped stone tool with a relatively long, narrow projection that is intended for boring a hole, generally through an alternating rotary motion. These tools may be either hafted or hand-held.

Spokeshave

A chipped stone tool that contains a notch used for scraping rounded shafts. The notch may be either bifacially or unifacially retouched.

Graver

A chipped stone tool with a sharp projection that is used to cut a groove in a softer material. The tool commonly referred to as a burin is also included in this category. This tool may also function as a drill or perforator.

Abrader

A cobble or block of stone that has either facets or grooves that were used for grinding, polishing, or shaping. This category includes faceted cobbles.

Core

A mass of stone that has been used for the removal of flakes for tool making.

Thick Biface

A mass of stone that has been bifacially worked, usually as a step in the reduction process of tool manufacture.

Hammerstone

A cobble that has been used for striking flakes from cores or in other forms of lithic processing.

Anvil

A stationary, often massive, stone that has been used in lithic production, either struck by a moving object with the intent of fracturing the moving mass, or as a base for bipolar flaking.

Decortification Flake

A flake removed during the process of lithic reduction that has present a portion of cortex from the reduced stone mass.

Bifacial Thinning Flake

A flake that has flake scars on both sides, exhibiting a single positive scar on one side and one or more negative scars on the opposite

side. The terms primary and secondary may be applied to this type, but will refer to loose size categories.

Angular shatter

Lithic waste that is a by-product of the reduction process, but because of its highly irregular shape is otherwise unclassifiable.

VI. HISTORIC ARTIFACT TYPOLOGY

The analysis of the historic artifacts recovered during the reconnaissance of the Lower Ohio River Navigation Pool followed procedures that have been modified from various sources, including Miller and Stone (1970); Holschlag, Rodeffer, and Cann (1978); Drucker and Anthony (1979); and Gray (n.d.). Basically, the following analysis rests upon the development of a hierarchical arrangement of technological differences, with the most important characteristics being artifact composition and manufacturing technique. The intent of this classification system is to present an analysis that can be duplicated and quantified, thereby allowing comparisons to be made between collections.

Ceramics

The historic ceramics are divided into three primary classes based upon technological differences and historical context. The three classes are earthenware, stoneware, and porcelain. These three classes are subdivided into various exclusive groups based upon certain physical and/or stylistic properties. Further subdivisions are made on the basis of decorative style and technique. The definitions of these types are described in more detail in the following paragraphs.

Class I - Earthenware

Earthenwares are characterized by a porous, permeable paste made up of various mixtures of clay and fired at a low temperature. The coarse paste earthenwares have a very porous, granular paste consistency, tend to be relatively thick, and are generally utilitarian in nature. They are further subdivided on the basis of paste color, the presence or absence of a glaze, the type of glaze, and the color of the glaze. Brick and tile are also included in this category.

The fine-paste earthenwares have a smooth, fine-grained paste consistency and are relatively thinner than the coarse earthenwares. They are useful as temporal indicators because of their numerous stylistic changes through time. The fine earthenwares are first divided into two categories reflecting degree of paste hardness. This trait is controlled within the defined limits of the earthenware category by the chemical content of the paste and the temperature at which it is fired. The hardness is determined by scratching the edge of the sherd with a tempered steel tool. The sherds classified as soft can be scratched with very little pressure; a dark metallic line and no indentation is left on the sherds classified as hard.

The soft-paste fine earthenwares are creamware, pearlware, and whiteware. Creamware is generally considered the earliest of the three. It is characterized by an off-white to buff paste with a clear lead glaze exhibiting a yellow or green tint in the crevices. Pearlware is differentiated from creamware by a whiter paste and a bluish cast to the

glaze, caused by the addition of cobalt to the glaze. Whiteware is distinguished from the creamwares and pearlwares by a pure white soft paste and a totally transparent lead glaze. There is no indication of color in the crevices. Decorative techniques that are commonly found on these ceramics include molding, hand-painting, transfer-print, and annular (or banded) decorations, all in a variety of styles and colors.

Hard-paste fine earthenwares can be grouped mainly into two categories: ironstone and yellowware. Ironstone is used here as a generic term for those durable earthenware ceramics that exhibit a pure white, hard, compact paste. The lead glaze on the ironstone can either be clear or have the addition of cobalt, producing a bluish tint similar to pearlware. The decorative techniques used on ironstone are identical to those found on the soft-paste earthenwares. Yellowware is a name that has been given to those ceramics possessing a durable, compact yellow body and a clear lead glaze. The most common form of decoration on this type is an annular form consisting of concentric blue bands and white ridges. In addition to ironstone and yellowware, other hard-paste earthenwares have been found that exhibit other paste colors, such as blue, green, and pink. Each of these has been classified as a separate type of hard-paste earthenware.

Class II - Stoneware

Stonewares are characterized by a compact, finely grained, non-porous, opaque body that has been fired at a higher temperature than have the earthenwares. Since stonewares, by their nature, are impermeable, the use of glazes on stonewares is considered more of a decorative technique than utilitarian. The stonewares are divided on the basis of paste color, presence/absence of surface treatment, type of surface treatment, and color of surface treatment or decoration.

Class III - Porcelain

Porcelain is a highly vitrified ceramic distinguished by an impermeable, very finely grained and, sometimes, translucent body. It is further divided into two groups according to paste hardness. Hard-paste porcelain consists of a mixture of kaolin and feldspar (petunse), shows a conchoidal fracture, and is fired at an extremely high temperature. Soft-paste porcelain is manufactured from a mixture of ground glass and white clay, sometimes with feldspar or bone ash added. When chipped, the body is granular. Porcelains can be left unglazed (bisque), or be glazed and decorated in a variety of techniques, but usually either by hand-painting or transfer print. The decoration is applied either under or over the glaze.

Glass

Glass is first divided on the basis of its function, either as flat (window or mirror) glass or container glass. The flat glass is further defined on the basis of its color and its thickness. Container glass is first divided on the basis of primary technological differences into three categories: blown, molded, or pressed. Blown glass is characterized by no seams, varying thickness, the presence of a pontil mark on the base, and vertical striations on the neck. It is further subdivided by color, type of pontil mark, and type of rim. Molded glass is usually of consistent thickness and possesses mold seams in varying numbers. It is further subdivided on the basis of color, type of base, type of rim, and presence/absence of embossing. Pressed glass is of consistent thickness and possesses no mold seams. It is also classified on the basis of color and decoration.

Glass can be dated by various methods, including color (in some instances), type of pontil mark or base, and type of rim and closure.

Nails

Nails are initially divided on the basis of a primary technological difference into three categories: wrought, machine-cut, and wire-drawn. Wrought nails are made individually. They are characterized by a taper on all four sides, a hammered head, and a hammered point. They are further subdivided by length. Machine-cut nails characteristically possess two tapered sides and two straight sides. They have a square or blunt point, and a variety of head types can be found. They are subdivided by length and type of head, which indicates a functional difference. Wire-drawn nails are cylindrical, with a constant diameter, and have a sharp point. They are also subdivided on the basis of length (indicating pennyweight) and type of head (indicating function). Other types of fasteners are divided by type, manufacturing technique, and size.

Other Historic Artifacts

Other historic artifacts that were recovered during this project have been identified on the basis of material, manufacturing technique, and function, if possible. The majority of the artifacts that were found are ceramics, glass, or nails, with shell, strap iron, metal artifacts, and cinder or slag being represented in small quantities.

VII. SURVEY METHODOLOGY AND RESULTS

The study methodology employed during the reconnaissance of the considered Lower Ohio River Navigation Pool was similar to that employed on a number of large shoreline and easement surveys across the southeast (Oakley and Watson 1977; Watson 1979a, 1979b; White *et al.* 1980). It was necessary to modify the field strategy to some extent to comply with restrictions set forth in the scope of services (see Appendix B) and river conditions that were somewhat different from those of other southeastern rivers. It was also necessary, as with most large projects, to constantly modify the field strategy in response to variations, both minor and major, in field conditions. While these variations cannot be foreseen, neither can they be construed as unexpected. The majority of the modifications necessitated during this project centered on heavy, recent alluviation along the river banks (primarily on the Kentucky shore) and vegetative cover or water levels that were greatly at variance from existing maps.

The fieldwork was conducted by a team of four archaeologists, with limited field assistance from the principal investigator. The primary objective was to provide 100 percent coverage of all pool and easement areas being considered. As stated earlier, the standard field methodology had to be modified to comply with Section VII of the Scope of Services: "Under no circumstances will collecting activity or riverbank profile drawing cause any damage to the extant riverbank." This precluded the use of a number of standard field procedures such as unstructured shovel tests in areas where visibility is less than 30 percent, and "rake backs" or stripping of vegetation. This restriction undoubtedly reduced the number of sites located during the survey and often prevented the accurate measurement of site dimensions during the investigation. In areas of this nature, where both erosion and deposition may occur rapidly and with great intensity, visual surface inspection may not be adequate for locating all of the resources present. The rapidity and intensity of this erosion and deposition is demonstrated both by trees, as described in the environmental overview, and the presence of twentieth century artifacts, such as a complete bottle, exposed at a depth of greater than 1 meter on the face of an eroding levee remnant.

The normal field procedure was to assign two archaeologists to a section of riverbank or easement, and deploy them so that at no time was the coverage interval greater than 3 meters vertically or 15 meters horizontally. In areas where erosion was stripping the recent alluvium, an occurrence that was made obvious either through the vegetation or nature of the exposed soil, the coverage interval was decreased so that horizontal distance between investigators was not greater than 5 meters. As a matter of course, all erosional exposures such as ravines and cut-banks were examined for cultural remains, as were tree falls and other ground disturbances. If plowed fields were located adjacent to the survey areas, they were examined in addition to the normal coverage.

LOWER OHIO RIVER ARCHAEOLOGICAL RECONNAISSANCE

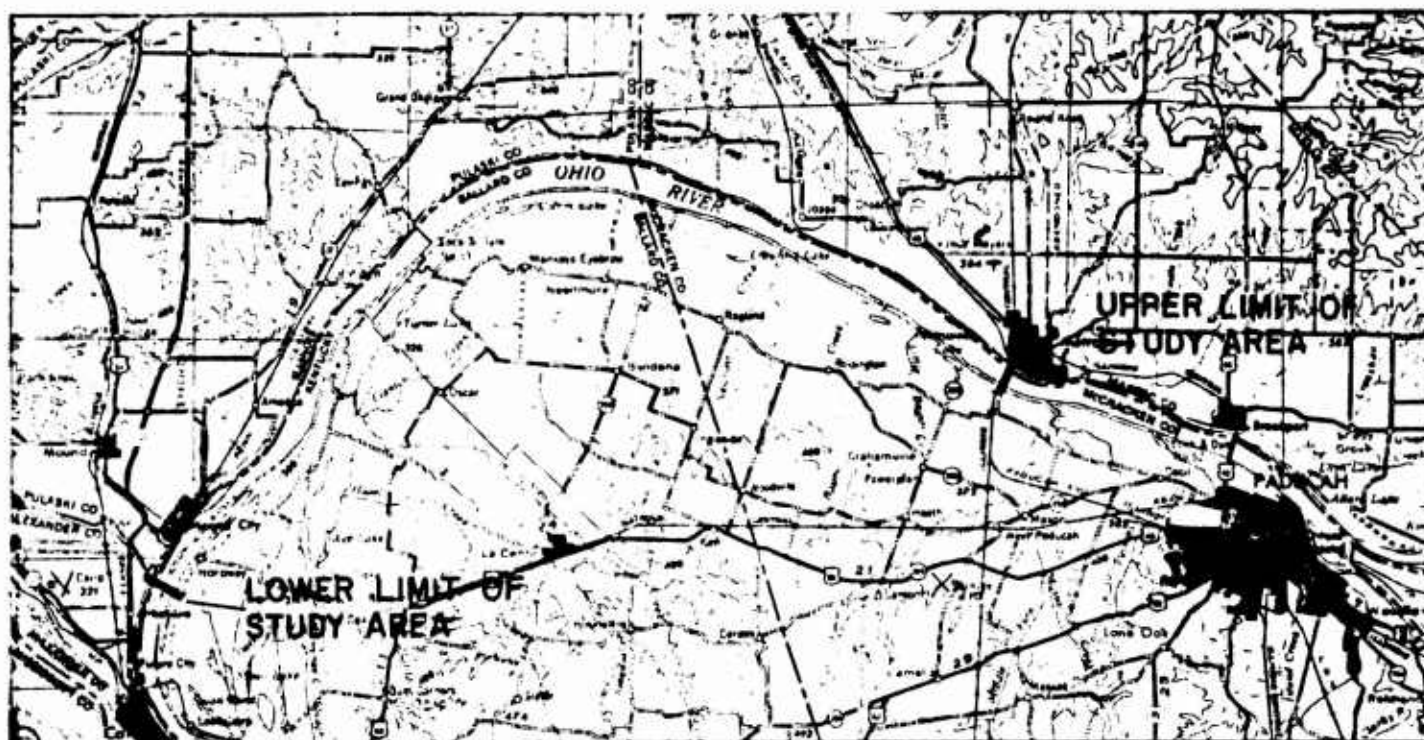


Figure 1a
Project Area

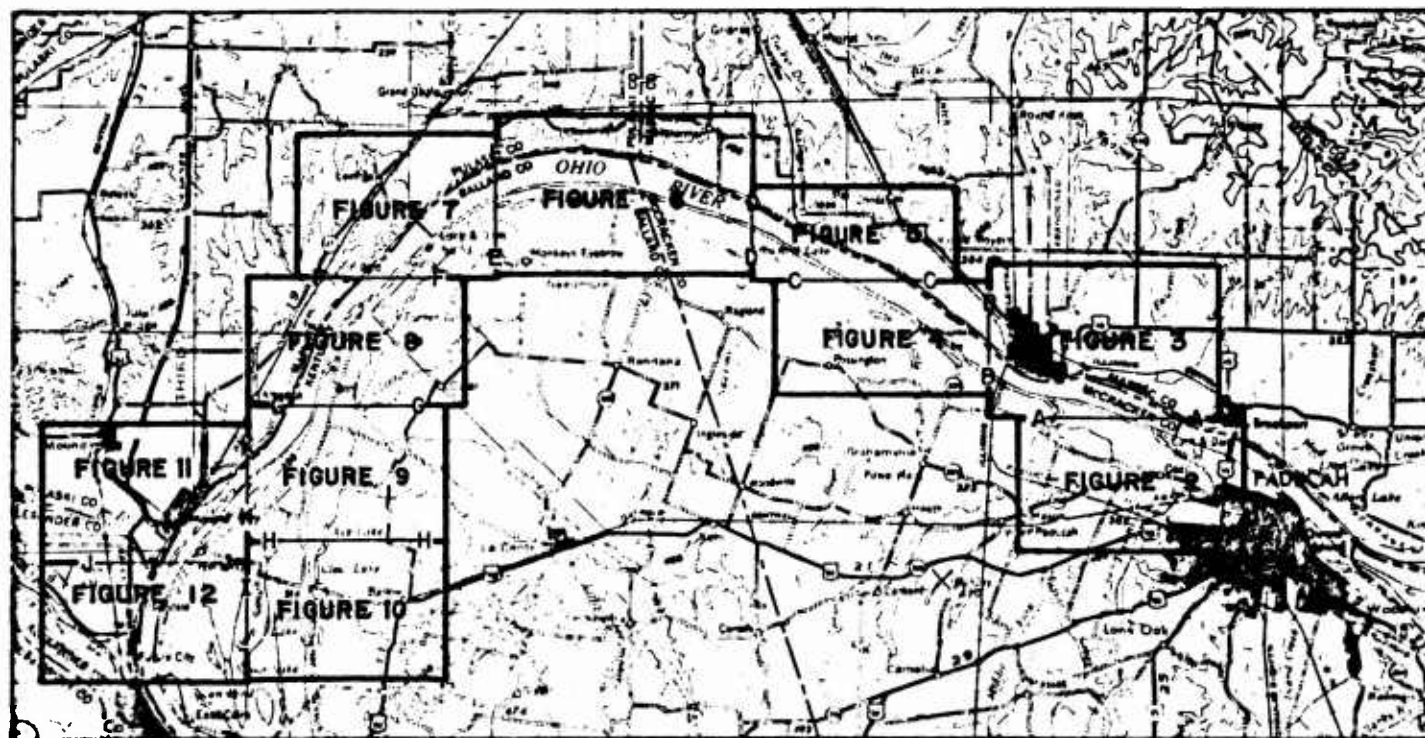
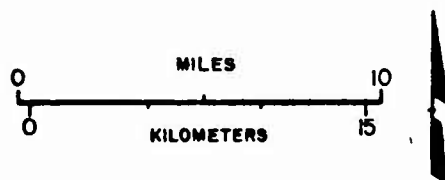


Figure 1b
Index

When either member of a survey team encountered cultural material, the interval between investigators was reduced to 2 meters or less so that representative samples of material could be collected. The collected material was bagged, labelled, and returned to WAPORA's archaeology laboratory in Cincinnati for washing, processing, and analysis. In addition to collecting material from each site, the investigators were responsible for the recording of both site-specific and environmental data for each site. This data included as a minimum: site size, material density, structural remains or features if present, nature and density of ground cover, basic soil type, probable water source, basic landform, and, as much as possible, erosional/depositional history. All sites were mapped onto USGS 7.5' quads and assigned provisional site numbers which included WAPORA's project number (W-595) and a sequential designation.

The site description format used for this project is relatively self-explanatory. The only items where questions may arise deal with site elevation and slope angle. Site elevation is given as a bracket figure in most cases with the numbers given to the nearest 5 feet. More precise elevation figures were not necessary to determine whether sites were on the easement, with all sites on the easement being well below the line and those above easement being considerably above it. Metric conversions for elevation are given to the nearest .5 meter. Slope angles are, for the most part, given to the nearest 5°. During the early part of the survey, a Brunton pocket transit was used to determine the slope angle. This was quickly abandoned because of the extreme variation in slope on each site, especially along the shoreline. The slope angles given are estimated averages for the visible portions of the site. Distance conversions within the descriptions will be given as approximates. It was thought unreasonable to convert a distance of approximately 1,000 feet to 304.8 meters, or 400 meters to 1,312 feet. Conversion will be approximate, but the discrepancy will be less than 2 percent, i.e. 304.8 will become 300 and 1,312 will be 1,300.

The order of the site descriptions will not be completely numerical. Because the numbers in this report are field numbers at this time, they do not necessarily fall into consecutive order as the river mile increases. Each site is keyed to a map that contains both site location and survey area information. The maps are arranged in consecutive order from the upper end of the pool at Lock and Dam 52, to the lower end, below Mound City, Illinois. Figure 1 shows both the general study area and the arrangement of the "Survey Areas and Site Locations" maps. Site descriptions will follow the appropriate map and the sites will be arranged numerically, if not consecutively, within each section. Artifact inventories will follow each site description. To aid in the utility of this report, symbols will follow some of the field site numbers. Those sites that are in the proposed project area will be designated with a ▼ . Those sites within the project area that are recommended for additional work are designated with a ⇌ .

W-595-8 (Figure 2) State: Kentucky County: McCracken

Cultural Affiliation: Prehistoric, nondiagnostic

Elevation: 315-320 feet MSL 96-97.5 meters MSL

Slope Direction: East Slope Angle: 4-8°

Original Water Source: Massac Creek Direction: East Distance: 30 meters

Ground Cover: Soybeans Visibility: 80%

Property Owner: Unknown

Map Reference: Paducah West KY-ILL, Previous Reference: None
1958

Site W-595-8 is a moderate-sized, 100 x 100 foot (30 x 30 meters) scatter of prehistoric lithics located on the edge and riser of a first terrace of Massac Creek northeast of a county road 1420 bridge. The site was first noted by lithic debris on a gravel bar in Massac Creek. Further investigation of the area indicated that the main body of the site was located along the edge of the first terrace and that the material in the creek bed had been redeposited by downslope erosion. Adverse impacts to the site appear to be limited to agricultural activity and should remain so unless the stream channel is altered. While this site may contain intact cultural deposits, it is not within the project area, and no recommendations will be made.

PREHISTORIC

- 3 Retouched flakes (1 heavily weathered)
- 1 Thick biface
- 8 Decortification flakes
- 2 Fire cracked rocks

HISTORIC

None

W-595- 9 (Figure 2) State: Kentucky County:McCracken

Cultural Affiliation: Prehistoric, nondiagnostic

Elevation: 315-320 feet MSL 96-97.5 meters MSL

Slope Direction: Southeast

Slope Angle: 4-8°

Original Water Source: Massac Creek Direction: Southeast Distance: 30 meters

Ground Cover: Soybeans

Visibility: 80%

Property Owner: Unknown

Map Reference: Paducah West KY-ILL, Previous Reference: None
1958

Site W-595-9 is moderate sized, 500 x 200 feet (152 x 60 meters), located on a first terrace and terrace riser of Massac Creek with the long axis of the site oriented roughly parallel to the creek in an east-west direction. The site is situated near the confluence of Massac Creek and a first order tributary, northeast of a county road 1420 bridge. While this site may have intact deposits, it is outside of the project area and no recommendations will be made.

PREHISTORIC

- 2 Thin biface fragments
- 1 Retouched flake
- 4 Thick biface fragments
- 16 Bifacial thinning flakes
- 9 Decortification flakes
- 1 Angular shatter

HISTORIC

None

W-595-1 ▼ ⇌ (Figure 3) State: Illinois County: Massac

Cultural Affiliation: Prehistoric, nondiagnostic

Elevation: 295 feet MSL 90 meters MSL

Slope Direction: Southwest Slope Angle: Unknown

Original Water Source: Ohio River Direction: Southwest Distance: N/A

Ground Cover: Some weeds, silt Visibility: 80%

Property Owner: Thomas Garrett

Map Reference: Metropolis ILL-KY, Previous Reference: None
1967

Site W-595-1 is a small, possibly encapsulated lithic scatter located downstream of Lock and Dam 52. The collected material, which was restricted to lithic debris, was recovered from a narrow band of gravel and clay that was overlain by approximately 10 feet of sandy alluvium. All of the artifacts were collected from the outwash in front of the gravel lens and cannot be conclusively shown to have originated there. Total dispersion of material is restricted to less than 30 feet (10 meters) of river bank. While the artifact inventory includes both retouched and utilized flakes, it is possible that the gravel outcrop served as a quarry site prior to encapsulation. Limited testing will be recommended for W-595-1 to determine, as much as possible, the extent of the site, and to assess the site's integrity.

PREHISTORIC

- 2 Thin biface fragments
- 2 Unifacial retouch flake knives (1 on bi-polar blade)
- 3 Retouched flakes
- 2 Utilized flakes
- 1 Crude chopper (on massive cobble spall)
- 1 Fractured cobble (impact damage on acute angles)
- 13 Bifacial thinning flakes (1 massive, 3 of unidentified igneous material)
- 13 Decortification flakes (1 Harrison County chert, 1 igneous)
- 5 Angular shatter (1 heat treated)
- 2 Fire cracked rocks

W-595-2 (Figure 3) State: Illinois County: Massac

Cultural Affiliation: Historic, late nineteenth-twentieth century

Elevation: 295-300 feet MSL . 90-91.5 meters MSL

Slope Direction: Southwest

Slope Angle: 15-20° (River bank)

Original Water Source: Ohio River Direction: Southwest Distance: N/A

Ground Cover: None, exposed bank Visibility: 100%

Property Owner: Unknown

Map Reference: Metropolis ILL-KY, Previous Reference: None
1967

Site W-595-2 is a small scattering of historic material located along the Ohio River downstream of Lock and Dam 52. The majority of the material collected at this site consisted of nails and miscellaneous iron artifacts. It is possible that this debris is the remains of some type of agriculturally related structure, as is indicated by the horseshoe and wire fragments, but no firm functional category can be assigned. The site, which extends approximately 150 feet (45 meters) along the river, has been heavily disturbed by erosion and does not appear to contain any intact cultural remains. It is unlikely that significant information could be produced by additional investigation. Cultural resource clearance is recommended for W-595-2.

PREHISTORIC

None

HISTORIC

Metal

- 3 Barbed wire fragments
- 3 Pieces wire
- 1 Wire bucket handle
- 1 Piece strap iron
- 1 Strap iron artifact, nonidentified
- 1 Iron artifact, nonidentified
- 1 Horseshoe
- 4 Wire nails, common head, 4 3/8 - 4 3/4"
- 1 Wire nail, common head, 5 3/8"
- 1 Wire nail, common head, 5 1/2"
- 1 Wire nail, common head, 5 7/8"
- 1 Wire nail, common head, 6 1/2"
- 5 Wire nails, common head, 3 1/2 - 3 7/8"
- 2 Wire nails, double-headed, 4 3/4"
- 1 Machine-cut spike, square head, 7 1/4"
- 9 Machine-cut nails, common head, 5 1/2"
- 5 Machine-cut spikes, rose heads, 6 5/8 - 9 1/2"
- 3 Machine-cut spikes, square heads (?), 4" - 6"
- 8 Wire nails, common head, 3 1/2 - 5 1/2"
- 22 Nail fragments
- 1 Large screw, octagonal head, 6 7/8"

SITE NUMBER: W-595-2 (continued)

Glass

- 1 Clear basal sherd, rough pontil (to 1870)
- 1 Brown basal sherd, embossed (twentieth century)

Ceramics

- 2 Buff paste stoneware, gray saltglaze. 1 body and 1 base

W-595-3 ▼ (Figure 3) State: Illinois County: Massac

Cultural Affiliation: Historic, late nineteenth - twentieth century

Elevation: 295-300 feet MSL 90-91.5 meters MSL

Slope Direction: Southwest Slope Angle: 15-20° (River bank)

Original Water Source: Ohio River Direction: Southwest Distance: N/A

Ground Cover: None, exposed bank Visibility: 100%

Property Owner: Unknown

Map Reference: Metropolis ILL-KY, Previous Reference: None
1967

Site W-595-3 is a moderate-sized, 200 x 30 foot (60 x 10 meters) scatter of historic artifacts located along the bank of the Ohio River downstream of Lock and Dam 52. The majority of the material collected suggests a possible agriculturally related structure. It is likely that the original site was smaller, but that erosion has spread the material along a much larger section of river bank. Because of the heavy erosional damage to this site and the lack of structural remains or features, it is unlikely that significant information would be obtained by further work. Cultural resource clearance is recommended for W-595-3.

PREHISTORIC

None

HISTORIC

Metal

- 1 Log raft chain
- 2 Pieces wire
- 1 Lead bullet, 8 mm dia., 14 mm long
- 1 S-shaped strap iron piece
- 3 Strap iron fragments, 2 w/nails
- 3 Nonidentified iron fragments
- 2 Pieces barbed wire
- 6 Wire nails, common head, 2 5/8 - 4 1/2"
- 14 Wire nails, common head, 5 - 7"
- 2 Wire nails, common head, 7 1/2 - 8"
- 1 Wire nail, double head, 4 3/8"
- 8 Nail fragments
- 6 Machine-cut nails, 6 1/4 - 7 3/8"
- 2 Machine-cut spikes, 7 1/2"
- 3 Railroad spikes
- 1 Bolt (w/nut)
- 1 Machine-cut spike, 9 1/4"
- 2 Machine-cut spikes, 12 1/2"

Glass

- 2 Brown bottle glass, 1 basal

Miscellaneous

- 1 Slag

W-595- 4 ▼ (Figure 3) State: Illinois County: Massac

Cultural Affiliation: Historic, late nineteenth-early twentieth century

Elevation: 295-300 feet MSL 90-91 meters MSL

Slope Direction: Southwest Slope Angle: 15-20° (River bank)

Original Water Source: Ohio River Direction: Southwest Distance: N/A

Ground Cover: None, exposed bank Visibility: 100%

Property Owner: State of Illinois (Fort Massac Park)

Map Reference: Metropolis ILL-KY, Previous Reference: None
1967

Site W-595-4 is a small scattering of historic material located on the bank of the Ohio River upstream of Massac Creek. The material collected from the site was restricted to a small quantity of nails, an iron washer, and two bottles. In all probability, the nails and washer are from floating wooden debris and the bottles were "floaters." Because of the very questionable provenience of these artifacts, it is unlikely that any significant information could be obtained from further investigation. Cultural resource clearance is recommended for W-595-4.

PREHISTORIC

None

HISTORIC

Metal

- 3 Nails
- 1 Spike, machine-cut
- 1 Iron washer

Glass

- 1 Light green bottle (1880-1913)
molded seams to 1/4" from top (1880-1913), snap case base (1855-1913),
embossed (Dodson-Hils Mfg. Co., St. Louis), applied lip (1850-1913)
- 1 Light blue bottle (1880-1913)
molded seams, snap case base, embossed, applied lip (Sanford,
Chamberlain, & Albers Druggists, Knoxville, Tennessee)

W-595- 5 ▼ (Figure 3) State: Illinois County: Massac

Cultural Affiliation: Prehistoric, nondiagnostic

Elevation: 295-300 feet MSL 90-91.5 meters MSL

Slope Direction: Southwest Slope Angle: 10-15°

Original Water Source: Ohio River Direction: Southwest Distance: N/A

Ground Cover: None, exposed bank Visibility: 100%

Property Owner: State of Illinois (Fort Massac Park)

Map Reference: Metropolis ILL-KY, Previous Reference: None
1967

Site W-595-5 is a small, 50 x 50 foot (15 x 15 meters) scatter of lithic debris located on the Illinois bank of the Ohio River upstream of Massac Creek. The recovered material consisted of a very small amount of debitage collected from the surface of an eroding beach. It is possible that the material may be associated with a site designated Mx 159, located on the bank above the site. Unfortunately, the information available for Mx 159 is at best marginal and the investigators were unable to relocate the site in the field. The lack of any intact cultural matrix and the paucity of material make it unlikely that any significant information could be obtained from further investigation. Cultural resource clearance is recommended for W-595-5.

PREHISTORIC

2 Retouched flakes
1 Angular shatter
1 Bifacial thinning flake

HISTORIC

None

W-595- 6▼ (Figure 3) State: Kentucky County: McCracken

Cultural Affiliation: Historic, late nineteenth - twentieth century

Elevation: 295-300 feet MSL 90-91.5 meters MSL

Slope Direction: Southwest Slope Angle: 15-20° (River bank)

Original Water Source: Ohio River Direction: Southwest Distance: N/A

Ground Cover: None, exposed bank Visibility: 100%

Property Owner: Unknown

Map Reference: Metropolis ILL-KY, Previous Reference: None
1967

Site W-595-6 is a small scattering of historic debris located along the Kentucky shore of the Ohio River downstream of the new Interstate 24 bridge. The site, which measures approximately 300 feet (90 meters) southeast by northwest along the river, and 30-50 feet (9-15 meters) up the bank, probably represents a small concentration of artifacts that has been scattered downstream by the action of the river. It is possible that the nails, which came from a fairly restricted area, represent the remains of a musselers boat. The remaining material could have come from a number of sources. Site W-595-6 appears to lack cultural matrix integrity and is most likely a scattering of artifacts from several sources. It is unlikely that additional work could produce significant information. Cultural resource clearance is recommended for W-595-6.

PREHISTORIC

None

HISTORIC

Metal

- 3 Badly rusted nail fragments
- 1 Wire nail, common head, 5"
- 1 Wire nail, common head, 2"
- 4 Large machine-cut spikes, square heads, 5 - 7"

Glass

- 1 Clear bottle neck & rim, molded (2 seams), applied lip (1890-1900)

Ceramics

- 1 Buff paste coarse earthenware, brown lead glazed ext., red-brown lead glazed int., basal sherd
- 1 Buff paste stoneware, brown lead glaze int. & ext., incised decoration (portions of a written word)

Miscellaneous

- 1 32-Caliber shell casing, brass
- 1 Brick present, not collected

W-595-7 (Figure 3) State: Kentucky County: McCracken

Cultural Affiliation: Prehistoric, nondiagnostic; historic, late nineteenth -
early twentieth century

Elevation: 315-320 feet MSL 96-97.5 meters MSL

Slope Direction: East

Slope Angle: 0-5°

Original Water Source: Massac Creek Direction: East Distance: 25 meters

Ground Cover: Brush, leaves Visibility: 40-60%

Property Owner: Clifton McElya

Map Reference: Metropolis ILL-KY, Previous Reference: None
1967

Site W-595-7 is a moderate-sized scatter of historic and prehistoric material located on the west side of Massac Creek upstream of its confluence with the Ohio River. The site was first noted by a light scatter of lithic debris eroding down the easement slope. Further investigation indicated that the main body of the site was above easement and that material was washing down from a number of erosional exposures. A picnic shelter and several related structures have been built on the site and much of the erosion appears to be associated with these structures. Because this site is not on easement, no recommendations will be made.

PREHISTORIC

- 1 Projectile point/knife base, nondiagnostic
- 3 Projectile point/knife distal ends
- 1 Projectile point/knife reworked to scraper
- 1 End scraper (unifacial)
- 1 Thin biface fragment
- 13 Retouched flakes
- 7 Utilized flakes
- 1 Drill
- 20 Fire cracked rock fragments
- 11 Decortification flakes
- 59 Bifacial thinning flakes
- 8 Angular shatter

HISTORIC

Glass

- 1 Bottleneck-lavender blown glass, applied rim (1880-1925)

Ceramics

- 3 Sherds ironstone, w/cobalt, plain (2 basal sherds)
- 1 Yellowware rim sherd
- 2 Gray paste stoneware, unglazed ext., red slipped int.
- 1 Gray paste stoneware, unglazed
- 1 Buff paste stoneware, white lead glaze ext., dark brown lead glaze int.
- 3 Buff paste stoneware, dark brown lead glaze int. & ext.
- 3 Buff paste stoneware, olive green alkaline glaze ext. & int.
(1 basal sherd)

W-595-27 (Figure 3) State: Illinois County: Massac

Cultural Affiliation: Prehistoric, nondiagnostic; historic, late nineteenth -
early twentieth century

Elevation: 320-330 feet MSL 97-100 meters MSL

Slope Direction: N/A

Slope Angle: N/A

Original Water Source: Ohio River/ Direction: South/East Distance: 20 meters
Seven Mile Creek

Ground Cover: Brush and forest Visibility: 0-20%, some areas 100%
litter

Property Owner: State of Illinois (Fort Massac Park)

Map Reference: Metropolis ILL-KY, Previous Reference: None
1967

Site W-595-27 is a moderate-sized, 400 x 400 foot (122 x 122 meters) scatter of historic and prehistoric material located downstream of the Ohio River/Seven Mile Creek confluence. The site is situated on a relatively level area that is currently forested and is a portion of Fort Massac Park. The material was randomly scattered across the site with no apparent concentrations. The majority of the material was collected from a series of roads and trails that traverse the area. The majority of the historic material collected suggests a domestic structure, but a review of existing historic maps has not produced any indication of a structure in the area. Because this site is not within the project area, no recommendation will be made.

PREHISTORIC

- 2 Core fragments
- 3 Fire cracked rocks
- 2 Bifacial thinning flakes
- 1 Decortification flake

HISTORIC

Metal

- 2 Pieces strap iron, nailed together
- 1 Saw blade fragment
- 1 Wire fragment
- 3 Wire nail fragments
- 4 Wire nails, common heads, 3 1/8 - 4"
- 6 Wire nails, common heads, 4 1/4 - 4 3/4"
- 5 Wire nails, common heads, 5 - 5 1/2"
- 2 Wire nails, common heads, 6 1/2 - 7 1/2"
- 1 Machine-cut nail, common head, 5 1/2"
- 1 Machine-cut spike, rose head, 8 5/8"

SITE NUMBER: W-595-27 (continued)

Glass

- 1 Clear flat glass, 5 mm
- 1 Light green flat glass, 3 mm
- 4 Clear bottle glass
- 1 Brown bottle glass
- 1 "Pebbled" clear bottle glass
- 1 Piece pressed clear glass, probably bowl or dish
- 1 Light blue bottle base, molded, embossed, automatic bottling machine
(1903-) (Williams Co.)

Ceramics

- 2 Pearlware sherds, plain
- 1 Whiteware (mended) rim sherd w/molded
- 1 Ironstone sherd, w/cobalt added

Miscellaneous

- 8 Shell button blanks

15 McN 11 (McElya Mound) State: Kentucky County: McCracken
(Figure 3)

Cultural Affiliation: Prehistoric, Woodland or Mississippian; historic, mid-nineteenth-early twentieth century

Elevation: 315-320 feet MSL 96-97.5 meters MSL

Slope Direction: Northwest

Slope Angle: 0-10°

Original Water Source: Ohio River/ Direction: North/West Distance: 30 meters
Massac Creek

Ground Cover: Variable, camping Visibility: 40-90%
area/soybeans

Property Owner: Clifton McElya

Map Reference: Metropolis ILL-KY, Previous Reference: KY site files
1967

Site 15 McN 11 is located upstream of the confluence of the Ohio River and Massac Creek. While the site is not within the proposed flowage easement, its location near the exposed confluence makes erosion highly probable. For this reason the investigators felt that verification of location and assessment of conditions were in order. No trace of the reported mound was located by the survey team. A small amount of lithic debris was located on a first terrace of Massac Creek, but because of its nondiagnostic nature it could not be definitely associated with the reported mound. A fairly large, although not heavy, concentration of historic artifacts was noted in the reported location of 15 McN 11 and collections were made. Review of historic maps for the area produced no indication of a structure at the site. Because the area is easily accessible by road and has been used as a campground, it is possible that some of the artifacts represent dumping activity. Because the site is not in the project area, no recommendations will be made.

PREHISTORIC

- 1 Retouched flake
- 1 Uniface scraper
- 1 Drill fragment (mid-section)
- 1 Core fragment
- 2 Thick bifaces
- 8 Bifacial thinning flakes
- 3 Decortification flakes
- 1 Angular shatter

HISTORIC

Metal

- 1 Strap iron fragment

SITE NUMBER: 15 McN 11 (continued)

Glass

- 1 Flat glass, light green, 6 mm
- 1 Clear bottle glass
- 1 Clear bottle glass, rim, 1880-
- 1 Milk glass zinc lid liner fragment
- 1 Light green bottle glass
- 3 Lavender bottle glass, 1880-1925
- 6 Aqua bottle glass, screw rim, base automatic bottling machine, 1903-

Ceramics

- 1 Whiteware rim sherd, plain
- 6 Ironstone sherds, plain (3 rims), (5 w/cobalt, 1 clear)
- 3 Coarse buff paste stoneware, w/dark brown salt glaze
- 1 Buff paste stoneware, no exterior surfaces
- 1 Buff paste stoneware, clear salt glaze
- 1 Gray paste stoneware, clear salt glaze ext., red-brown lead glaze int.
- 1 Gray paste stoneware, clear salt glaze ext., dark brown int. (lead)
- 7 Gray paste stoneware, clear salt glaze ext., dark brown lead glaze int.
- 1 Gray paste stoneware, brown salt glaze ext., red-brown lead glaze int.
- 1 Buff paste stoneware, white salt glaze ext., brown lead glaze int.

Miscellaneous

- 1 Brick fragment
- 1 Graphite core

W-595- 14 (Figure 5) State: Kentucky County: McCracken

Cultural Affiliation: Prehistoric, nondiagnostic

Elevation: 320 feet MSL 97.5 meters MSL

Slope Direction: Northeast

Slope Angle: 0-5°

Original Water Source: Bean Branch Direction: Northeast Distance: 30 meters

Ground Cover: Soybeans

Visibility: 60-80%

Property Owner: Felix C. Thomspon

Map Reference: Joppa ILL-KY, 1967 Previous Reference: None

Site W-595-14 is an elongated, 150 foot (45 meters) southeast/northwest by 50 foot (15 meters) southwest/northeast, scatter of prehistoric lithic debris located on a low levee remnant overlooking a levee flank stream called Bean Branch. The site is situated on the south side of the branch, upstream of Newtons Creek. Material from the site was randomly spread and no concentrations were noted. The limited artifact inventory makes it difficult to assign any function to site W-595-14. No features or midden were noted in the area of the site, but the possibility of subsurface deposits should not be eliminated. Because site W-595-14 is not within the project area, no recommendations will be made.

PREHISTORIC

3 Decortification flakes
15 Bifacial thinning flakes
2 Angular shatter

HISTORIC

None

W-595- 18 (Figure 5) State: Kentucky County: McCracken

Cultural Affiliation: Historic, early twentieth century

Elevation: 320 feet MSL 97.5 meters MSL

Slope Direction: Northeast

Slope Angle: 0-5°

Original Water Source: Bean Branch/ Direction: Northeast/ Distance: 30 meters/
Possible Well Unknown Unknown

Ground Cover: Soybeans Visibility: 60-80%

Property Owner: Olie E. Price and Felix C. Thompson

Map Reference: Joppa ILL-KY, Previous Reference: None
1967

Site W-595-18 is a small, 75 x 75 foot (23 x 23 meters) scatter of historic material located on a levee remnant on the south side of Bean Branch. The site, which is located immediately south of site W-595-14, has been bisected by a drainage ditch, and no evidence of structural remains or features was noted. No structures were noted in the area during a review of historic maps, but the artifacts recovered suggest that the site may post-date the latest maps (1911-1914). Because the site is not within the project area, no recommendations will be made.

PREHISTORIC

None

HISTORIC

Glass

- 1 Milk glass bowl fragment w/blue painted exterior
- 1 Lavender bottle fragment (1880-1925)

Ceramics

- 4 Ironstone, clear lead glaze, 1 base w/maker's mark, no decoration
"Golden Wheat, Made in USA, 22k gold, oven proof"
- 3 Ironstone, cobalt added (1 rim, 1 base, 1 molded handle) no decoration
- 2 Gray paste stoneware, dark red exterior glaze, medium brown interior glaze
- 1 Gray paste stoneware, unglazed interior, clear lead glaze exterior
- 1 Hard-paste porcelain, blue transfer print, rim
- 1 Soft-paste porcelain vessel base

W-595- 20 ▼ (Figure 5) State: Illinois County: Massac

Cultural Affiliation: Prehistoric, nondiagnostic; historic, late nineteenth -
twentieth century

Elevation: 295-300 feet MSL 90-91.5 meters MSL

Slope Direction: Southwest Slope Angle: 5-15° (River bank)

Original Water Source: Ohio River Direction: Southwest Distance: N/A

Ground Cover: None (exposed beach) Visibility: 100%

Property Owner: Phil Beans

Map Reference: Joppa ILL-KY, Previous Reference: None
1967

Site W-595-20 is a small, 100 x 100 foot (30 x 30 meters) scatter of historic and prehistoric material located on the Illinois bank of the Ohio River, near River Mile 950. The material was randomly distributed on the site and no evidence of features or structural remains was noted during the investigation. A thorough examination of the area failed to produce a point source for either the historic or prehistoric material. A gravel outcrop of material similar to the lithic debris was in evidence along the bluff behind the site, and the recovered material suggests quarrying and preliminary shaping as an activity. It is possible that the historic material is associated with several houses located along the edge of the bluff. Because the site has no intact deposits, it is doubtful if additional significant information could be obtained through further work. Cultural resource clearance is recommended for W-595-20.

PREHISTORIC

- 4 Utilized flakes (2 on massive decortification flakes)
- 3 Thick bifaces
- 1 Fire cracked rock
- 6 Decortification flakes

HISTORIC

Metal

- 1 Wire nail fragment
- 1 Wire nail, 5", common head

Glass

- 1 Clear bottle glass
- 1 Light green bottle glass
- 1 Light blue bottle glass, w/embossed printing
- 1 Aqua bottle glass rim, screw top, molded (1920 -)
- 5 Lavender bottle glass (2 rims - 1 molded to top [1920-1925], and 1 applied rim [1880-1900])

SITE NUMBER: W-595-20 (continued)

Ceramics

- 1 Yellow lead glazed stoneware facing tile, ridged
- 1 Buff paste stoneware, dark brown lead glaze ext., unglazed int.

Miscellaneous

- 2 Brick fragments

W-595-21 ▼ (Figure 5) State: Illinois County: Massac
Cultural Affiliation: Prehistoric, nondiagnostic
Elevation: 300 feet MSL 91.5 meters MSL
Slope Direction: South Slope Angle: 5-10°
Original Water Source: Ohio River/ Stream Direction: South & East Distance: N/A
Ground Cover: Variable, clear and forest litter Visibility: 30-40% and 100%
Property Owner: Unknown
Map Reference: Joppa ILL-KY, Previous Reference: None
1967

Site W-595-21 is a very small, 25 x 25 foot (8 x 8 meters), extremely limited scatter of lithic debris located at the confluence of the Ohio River and an unnamed second-order stream, northwest of the Joppa generating station. All of the material was recovered from a small eroded area, and no intact features or midden were present. Because of the paucity of material and the absence of features or intact deposits, it is unlikely that significant information could be obtained by further investigation. Cultural resource clearance is recommended for site W-595-21.

PREHISTORIC

- 2 Fire cracked rocks
- 1 Decortification flake
- 1 Bifacial thinning flake

HISTORIC

None

W-595- 25 ▼ ⇄
(Figure 5)

State: Illinois County: Massac

Cultural Affiliation: Historic, late nineteenth and early to mid-twentieth century

Elevation: 290-360 feet MSL 88.5-109 meters MSL

Slope Direction: Primarily Southwest Slope Angle: Variable 0-20°

Original Water Source: Ohio River Direction: Southwest Distance: N/A

Ground Cover: None to dense second growth
Visibility: 0-100%

Property Owner: Chicago and Eastern Illinois Company

Map Reference: Joppa KY-ILL, 1967 Previous Reference: None

Site W-595-25 is a rail-barge transfer facility located on the bank of the Ohio River at Joppa, Illinois. The site consists of two major activity areas. The first section, section A, is two railroad spurs that extend into the present pool of the Ohio River. The exact situation of these spurs during use of the facility is not known, but they appear to have extended into the river on pilings. The barge was moored alongside the track and cargo either loaded or off-loaded by hand or crane. This portion of the facility has been heavily damaged by erosion, and will be adversely impacted by elevated water levels. The second portion of the facility, Section B, is a hopper car unloading structure situated on a raised section of track over a narrow inlet. Barges were apparently pulled in beneath the raised tracks, coal dumped directly from car to barge with the aid of some relatively sophisticated machinery. The tracks and unloading equipment for this portion of the facility are relatively intact, but should not be adversely affected by the proposed change in water levels.

Exact dates are not known for the construction of the transfer facilities. Section A was in use prior to the compilation of data for the 1911-1914 navigation charts. Preliminary investigations indicate that the Chicago and Eastern Illinois Railroad was organized in 1894, but this appears to have been little more than a name change from an unnamed, pre-existing company. The only concrete statement possible for Section A is that it was built prior to 1911, but after the general appearance of the railroads in the area in 1840-1860. Section B was built after 1911-1914 (it is not shown on the navigation charts). Trees growing in the silted-up channel suggest that the facility was abandoned 20-30 years ago (ca. 1950).

Because the site represents a major phase of transportation in the Ohio River area, the significance should be apparent. The site appears to meet the minimum requirements for inclusion to the National Register of Historic Places in terms of age, local, and regional significance. The recommendations that will be made in this report will involve literature research, oral history, mapping of the facility, and photo documentation.

W-595- 10 (Figure 6) State: Kentucky County: McCracken

Cultural Affiliation: Prehistoric, nondiagnostic; historic, mid-nineteenth -
twentieth century

Elevation: 320 feet MSL 97.5 meters MSL

Slope Direction: North

Slope Angle: 0-15°

Original Water Source: Ohio River/ Direction: North/Unknown Distance: 100 meters/
Possible Well Unknown

Ground Cover: Soybeans Visibility: 60-80%

Property Owner: Rudy Scott

Map Reference: Bandanna KY-ILL,
1966

Previous Reference: None

Site W-595-10 is a moderate-sized, 150 x 150 foot (45 x 45 meters) scatter of both historic and prehistoric material located on a natural levee of the Ohio River upstream of its confluence with Redstone Creek. Analysis of the collected material suggests a domestic site for the historic occupation, and a possible hunting camp for the prehistoric occupation. During the investigation of the site, no features or midden were noted and no structural remains were in evidence. Review of historic maps indicate a structure in the vicinity of W-595-11, approximately 500 feet (152 meters) to the west, but none near W-595-10. Lack of surface evidence for midden, features, and structural remains at this site does not rule out their existence. Because this site is not within the project area, no recommendations will be made.

PREHISTORIC

- 1 Projectile point/knife, mid-section
- 1 Retouch flake
- 1 Nutting stone
- 2 Utilized flakes
- 3 Fire cracked rocks
- 1 Decortification flake
- 3 Bifacial thinning flakes (1 massive)
- 2 Angular shatter

HISTORIC

Glass

- 2 Lavender bottle fragments (1880-1925)
- 1 Dark blue bottle fragment
- 1 Brown bottle base (1920-)
- 1 Olive green bottle fragment
- 2 Light blue bottle fragments
- 2 Light green bottle fragments (burned)

SITE NUMBER: W-595-10 (continued)

Ceramics

- 1 Unglazed red earthenware (tile)
- 7 Ironstone, w/cobalt (4 rims), plain
- 1 Ironstone, burned
- 1 Ironstone, cobalt added, rim, w/late blue shell edge
- 1 Ironstone base, w/cobalt, small portion of mark
- 1 Semi-porcelain, plain
- 1 Yellowware base, plain
- 2 Stoneware, gray paste, salt glaze ext., dark brown slipped int.,
(1 w/blue stenciled lettering on ext.)
- 1 Gray paste stoneware, salt glaze ext., brown slipped int.
- 1 Gray paste stoneware, handle, unglazed
- 2 Gray/brown paste stoneware, salt glaze ext., brown slipped int.
- 1 Gray/brown paste stoneware base, brown lead glaze ext., brown slipped int.
- 1 Tan stoneware, medium brown lead glaze int./ext.
- 1 Buff paste stoneware, clear lead glaze ext. w/hand painted lettering,
brown slipped int.
- 1 Pink paste earthenware base, brown lead glaze ext./int.

Miscellaneous

- 1 Slag
- 8 Brick fragments

State: Kentucky **County:** McCracken

Cultural Affiliation: Prehistoric, isolated find; historic, late nineteenth - early twentieth century

Elevation: 320 feet MSL 97.5 meters MSL

Slope Direction: North Slope Angle: 0-15°

Original Water Source:	Ohio River/ Possible Well	Direction:	North/ Unknown	Distance:	North/ Unknown
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Ground Cover: Soybeans Visibility: 60-90%

Property Owner: Armstrong Cork Company

Map Reference: Bandanna KY-ILL, 1966 Previous Reference: 1911-14 Navigation charts

Site W-595-11 is a small, 100 x 100 foot (30 x 30 meters) scatter of historic material suggesting a domestic site, and a probable pre-historic isolated find of a single bifacial thinning flake. The site is located on a natural levee of the Ohio River upstream of its confluence with Redstone Creek. Examination of the 1911-1914 navigation charts indicate a structure in this area. No structural remains or features were noted by the investigators. Because the site is not within the project boundaries, no recommendations will be made.

PREHISTORIC

1 Bifacial thinning flake

HISTORIC

Class

- 1 Brown bottle glass (twentieth century)
2 Clear bottle glass (1 screw rim)
2 Light green bottle glass
4 Lavender bottle glass (1880-1925, 1 - applied rim)

Ceramics

- 6 Ironstone, clear lead glaze, plain (1 rim, 1 base)
4 Ironstone, cobalt added, plain (1 base)
1 Ironstone, rim sherd, "flow blue" transfer print
1 Soft-paste porcelain, plain

Miscellaneous

- 3 Small pieces of brick

W-595- 12 (Figure 6) State: Kentucky County: McCracken

Cultural Affiliation: Prehistoric, late Archaic and early Woodland; historic,
late nineteenth - early twentieth century

Elevation: 315-320 feet MSL 96-97.5 meters MSL

Slope Direction: North

Slope Angle: 0-15°

Original Water Source: Ohio River/ Direction: North/Unknown Distance: 50 meters/
Possible Well Unknown

Ground Cover: Soybeans Visibility: 50-70%

Property Owner: Rudy Scott

Map Reference: Bandanna KY-ILL,
1966

Previous Reference: 1911-1914 navigaton
charts

Site W-595-12 is a moderate-sized, 300 foot (90 meters), east/west by 100 feet (30 meters) north/south scatter of historic and prehistoric material located on a natural levee of the Ohio River upstream of its confluence with Redstone Creek. Analysis of the historic material indicates that the site was the location of a domestic structure. A structure is shown at this location on the 1911-1914 navigation charts. No structural remains were noted. Because the prehistoric collection is limited, little can be said of site function. Chronological placement of the site is based on one projectile point/knife (Archaic), and one sherd of grit-tempered plain ceramics (Woodland). Because of the limited collection, chronological placement should be viewed with caution. No features or midden were noted by the investigators, but this does not preclude their existence. Site W-595-12 is not within the project area, and no recommendations will be made.

PREHISTORIC

Projectile point/knife fragments

- 1 Distal end
- 1 Broad stemmed base w/grinding, probable Late Archaic
- 1 Retouched flake
- 1 Chipped stone hoe fragment
- 1 Fired limestone fragment
- 6 Fire cracked rocks
- 6 Decortification flakes
- 6 Bifacial thinning flakes

Ceramics

- 1 Sherd grit-tempered, plain

SITE NUMBER: W-595-12 (continued)

HISTORIC

Metal

- 2 Pieces of wire
- 2 Wire nails (1 finishing nail, 1 badly rusted)
- 1 Machine-cut nail fragment
- 2 Nonidentifiable nails

Glass

- 1 Clear container (dish/bowl) glass, w/molded diamond design
- 1 Light green bottle glass, w/embossed lettering on panel (1850-1915)
probably Caldwell's, Cairo, IL
- 1 Clear bottle, molded, applied rim, embossed (Newman Drug Co.,
Louisville, KY - 1880-1913)

Ceramics

- 1 Whiteware rim sherd, blue transfer print
- 1 Ironstone rim sherd, w/cobalt, hand painted blue-green
- 1 Gray paste stoneware, unglazed ext., dark brown slipped int., basal
sherds
- 1 Buff paste stoneware, rim sherd, unglazed ext., dark brown slipped int.

W-595-13 (Figure 6) State: Kentucky County: McCracken

Cultural Affiliation: Prehistoric, nondiagnostic; historic, nineteenth century isolated find

Elevation: 315-320 feet MSL 96-97.5 meters MSL

Slope Direction: North

Slope Angle: 0-15°

Original Water Source: Newtons
Creek/Possible Well

Direction: North/Unknown Distance: 15 meters/
Unknown

Ground Cover: Soybeans

Visibility: 80%

Property Owner: Edna Williams Alexander et al.

Map Reference: Bandanna ILL-KY,
1966

Previous Reference: 1911-1914 navigation
charts

Site W-595-13 is a small scattering of prehistoric material (with an isolated historic component) located on the south bank of Newtons Creek upstream of its confluence with the Ohio River. The site measures approximately 175 feet (53 meters) by 50 feet (15 meters) with the long axis oriented roughly southeast/northwest along the creek. Analysis of the prehistoric artifacts (although the collection is limited), along with the site size and location, suggests a possible hunting camp. The investigator noted no features or midden, but their existence should not be ruled out. While a historic structure is noted at this location on the 1911-1914 navigation charts, only two historic artifacts were recovered. It is not known whether this is a collection bias or indication of a specialized function for the structure. Because the site is not within the project boundaries, no recommendations will be made.

PREHISTORIC

- 1 Thin biface fragment
- 1 Bifacial worked flake (massive)
- 5 Retouched flakes (1 on decortification flake)
- 2 Utilized decortification flakes
- 1 Core fragment
- 6 Fire cracked rocks
- 6 Decortification flakes
- 16 Bifacial flakes
- 2 Angular shatter

HISTORIC

Glass

- 1 Clear bottle glass sherd

Ceramics

- 1 Ironstone, clear lead glaze, thick cup rim

W-595- 15 (Figure 6) State: Kentucky County: McCracken

Cultural Affiliation: Prehistoric, isolated find; historic, early twentieth century

Elevation: 315-320 feet MSL 96-97.5 meters MSL

Slope Direction: N/A

Slope Angle: N/A

Original Water Source: Ohio River/
Possible Well

Direction: North/
Unknown

Distance: 150 meters/
Unknown

Ground Cover: Soybeans

Visibility: 70-90%

Property Owner: Edwin L. Burnley

Map Reference: Bandanna KY-ILL,
1966

Previous Reference: None

Site W-595-15 is a small, 50 x 50 foot (15 x 15 meters) scatter of historic material located on a natural levee of the Ohio River downstream from its confluence with Newtons Creek. In addition to the historic material, a single bifacial thinning flake was recovered. Examination of the site produced no evidence of features or structural remains and no structures were noted on the historic maps reviewed. Because Site W-595-15 is not within the project area, no recommendations will be made.

PREHISTORIC

1 Bifacial thinning flake

HISTORIC

Glass

- 1 Light green bottle glass
- 2 Light green bottle glass (1 rim)
- 2 Lavender bottle glass (1 base off-center round seam, 1903-)
- 15 Clear bottle glass
- 2 Clear bottle bases (1903-)
- 1 Clear bottle bases (1903-)
- 1 Clear bottle neck fragment (molded), melted
- 2 Clear bottle rims (screw cap)
- 1 Clear bottle rim (twentieth century)

Ceramics

- 1 Ironstone, cobalt added, basal sherd

W-595-16 (Figure 6) State: Kentucky County: Ballard

Cultural Affiliation: Prehistoric, isolated find; historic, mid-nineteenth - early
twentieth century

Elevation: 320-325 feet MSL 97.5-99 meters MSL

Slope Direction: North

Slope Angle: 0-10°

Original Water Source: Redstone Direction: East/Unknown Distance: 100 meters/
Creek/Possible Well Unknown

Ground Cover: Soybeans, weeds Visibility: 20-50%

Property Owner: Armstrong Cork Company

Map Reference: Bandanna KY-ILL, Previous Reference: None

Site W-595-16 is a moderate-sized, 150 x 150 foot (45 x 45 meters) scatter of historic ceramics and glass with an isolated prehistoric component of two waste flakes. The site is situated in a badly overgrown field on the west side of Redstone Creek south of its confluence with the Ohio River. The site is located well above easement, but was noted as material eroding out of a dirt road as the investigators were leaving the area. No indications of features or structural remains were noted, and no structures were indicated on historic maps. Because the site is not within the project boundaries, no recommendations will be made.

PREHISTORIC

- 1 Decortification flake
- 1 Bifacial thinning flake (heavily fired)

HISTORIC

Glass

- 1 Milk glass fragment
- 1 Clear glass fragment
- 1 Clear glass rim, screw top (twentieth century)
- 2 Molded pink (transparent) bottle fragments

Ceramics

- 5 Whiteware, plain, 2 basal sherds
- 6 Ironstone, clear glaze, plain
- 1 Ironstone, cobalt added, rim

W-595- 17 (Figure 6) State: Kentucky County: Ballard

Cultural Affiliation: Prehistoric, probable Archaic; historic, late nineteenth -
early twentieth century

Elevation: 315-320 feet MSL 96-97.5 meters MSL

Slope Direction: North & South Slope Angle:

Original Water Source: Ohio River/ Direction: North/ Distance: 100 meters/
Possible Well Unknown Unknown

Ground Cover: Soybeans, weeds, Visibility: 40-100%
grasses

Property Owner: Clarence Rowland Ferren

Map Reference: Bandanna KY-ILL, Previous Reference: 1911-1914 navigation
1966 charts

Site W-595-17 is a large, 500 x 400 foot (150 x 120 meters) north/south by east/west scatter of historic and prehistoric material located along the crest of a natural levee of the Ohio River downstream of its confluence with Redstone Creek. While no spot concentrations of material were noted, the majority of the material came from the central portion of the site, along the levee crest. Analysis of the prehistoric material tentatively places the site in the Archaic Period and suggests a major village. Historic material analysis indicates a fairly wide range of activities and functions, all of which could be associated with a domestic complex. While the site is quite extensive and complex and may contain intact deposits, the investigators had limited time and all investigations were superficial. Because the site is not within the project boundaries, no recommendations will be made.

PREHISTORIC

- 1 Projectile point/knife fragment (stemmed-barbed, probably Archaic)
- 7 Thin biface fragments
- 1 End scraper
- 8 Retouched flakes (2 massive)
- 3 Utilized flakes
- 1 Thick biface
- 1 Drill (no hafting element)
- 26 Fire cracked rocks
- 24 Decortification flakes
- 204 Bifacial thinning flakes
- 33 Angular shatter

SITE NUMBER: W-595-17 (continued)

HISTORIC

Metal

- 3 Pieces of iron wire
- 1 Fragment iron hinge
- 1 Brass button, flat
- 1 Lead artifact
- 2 Wrought nails w/rose heads, 60-110 mm
- 3 Machine-cut nail fragments, w/common heads

Glass

- 7 Light blue flat glass, 2 mm
- 1 Clear flat glass, 8 mm
- 2 Blue glass slag
- 15 Brown bottle glass (1 neck & rim w/metal screw cap, 5 bases)
- 1 Aqua bottle glass (1 base, 2 different rims - 1 applied, 1 screw) (molded)
- 2 Light blue bottle glass, thick
- 2 Light blue bottle glass, thin, w/embossed lettering (DRW... VEGE...)
- 2 Light blue-green bottle glass (1 base)
- 3 Light green bottle glass (2 rims - both applied, 1880-1900)
- 3 Dark olive green bottle glass
- 2 Medium olive green bottle glass (1 rim - late 1800's)
- 3 Dark blue bottle glass (1 base, 1 side panel w/embossed lettering)
- 21 Lavender bottle/container glass (4 stemware base fragments, 3 different bottle base fragments, 1 applied rim & neck, 13 body fragments - 1880-1913)
- 1 Milk glass bottle fragment
- 5 Clear bottle glass (1 rim, 1 base - half pint liquor bottle, 1 side panel w/embossed lettering, 1 pressed glass side panel, 1 plain body fragment)

Ceramics

- 7 Pearlware, plain (4 basal sherds, 1 w/embossed mark, 1 rim sherd)
- 7 Ironstone, clear glaze, undecorated (1 rim, 1 base)
- 24 Ironstone, cobalt added, undecorated (3 rims, 5 bases)
- 1 Ironstone, cobalt added, blue shell-edge
- 1 Whiteware, blue edge-decorated
- 1 Pearlware, base, blue transfer print
- 1 Ironstone, clear glaze, rim, blue transfer print
- 1 Ironstone, cobalt added, blue transfer print
- 2 Ironstone, cobalt added, light blue transfer print (fruit basket design)
- 2 Ironstone, "flow blue" transfer print
- 1 Ironstone, clear glaze, green hand-painting
- 1 Burned soft-paste fine earthenware, blue-brown annular decoration
- 1 Ironstone, cobalt added, brown annular decoration
- 3 Burned ironstone, undecorated
- 2 Yellowware, undecorated
- 3 Semi-porcelain, cobalt added, plain (2 rims, 1 base)

SITE NUMBER: W -595-17 (continued)

Ceramics (continued)

- 2 Soft-paste porcelain, plain (1 rim, 1 base)
- 1 Soft-paste porcelain doll leg
- 3 Buff paste coarse earthenware, gray ext. glaze, dark brown int. glaze, (1 mended rim sherd), jar
- 2 Red paste earthenware, reddish-tan salt glaze ext., greenish int. glaze (1 base, 1 mended rim), milk pan
- 2 Buff paste earthenware, dark brown int. lead glaze, white ext. lead glaze (1 base)
- 5 Buff paste earthenware, dark brown int. lead glaze, cream ext. lead glaze (1 rim, 1 handle), jug
- 1 Red paste earthenware, unglazed ext., gray salt glaze ext.
- 1 Buff paste earthenware, green slipped ext., brown slipped int.
- 1 Buff paste coarse earthenware, thick, tan ext. glaze, dark brown int. glaze
- 1 Buff paste earthenware, unglazed ext., dark red slipped int.
- 1 Buff paste earthenware, red slipped int., gray glazed ext.
- 1 Cream paste earthenware, tan slipped int., reddish-tan glazed ext.
- 2 Pink paste earthenware, unglazed ext./int.
- 1 Buff paste earthenware, white lead glaze ext., dark brown lead glaze int.
- 1 Buff paste earthenware, white glazed ext., greenish-brown glazed int.
- 1 Buff paste earthenware base, reddish-tan glazed ext., dark brown lead glazed int.
- 1 Red paste earthenware, dark brown lead glaze int./ext.
- 1 Buff paste earthenware, green-brown glazed ext., dark brown lead glazed int. (rim - base), milk pan
- 3 Buff paste stoneware, gray salt glaze ext., yellowish-green lead glaze int.
- 5 Gray paste stoneware, clear salt glaze ext., dark brown slipped int.
- 4 Buff paste stoneware, greenish-brown alkaline glaze ext./int. (1 base)
- 1 Gray paste stoneware, medium brown glazed int., yellow ochre glazed ext.
- 7 Buff paste stoneware, medium brown int. lead glaze, off white ext. lead glaze (mended), bowl
- 1 Grayish-brown paste stoneware, rim, ceramic canning jar, dark brown lead glaze int./ext.
- 3 Grayish-brown paste stoneware, dark brown lead glaze ext./int.
- 4 Buff paste stoneware, dark brown lead glaze ext./int., bowl
- 1 Gray paste stoneware, dark brown lead glaze int., grayish-tan ext. glaze base
- 2 Gray paste stoneware, dark brown lead glaze int., olive green alkaline glaze ext. (1 handle)
- 1 Gray paste stoneware base, yellow ochre ext. glaze, medium brown int. glaze
- 2 Gray paste stoneware, clear ext. glaze, reddish-brown slipped int.
- 2 Thin buff paste stoneware, white lead glaze ext., medium brown lead glaze int.
- 2 Buff paste stoneware, medium brown slipped ext/int. (1 rim, 1 base), bowl
- 1 Buff paste stoneware, whitish ext. glaze, reddish-brown int. glaze, bowl
- 1 Buff paste stoneware, medium brown ext./int. glaze
- 1 Buff paste stoneware, unglazed ext., dark brown glazed int.
- 1 Buff paste stoneware, unglazed ext., dark brown glazed int.
- 1 Pink paste stoneware, dark brown lead glaze ext., reddish-brown glazed int.

SITE NUMBER: W-595-17 (continued)

Ceramics

- 1 Gray paste stoneware, unglazed int., greenish-brown alkaline glazed ext.

Miscellaneous

- 3 Brick fragments
- 1 Piece concrete
- 5 Pieces mussel shell
- 1 Mussel shell half
- 2 Teeth, nonhuman
- 1 Can (pistol) flint, bl. bc, black chert, probably de

W-595- 22 ▼ (Figure 6) State: Illinois County: Massac
Cultural Affiliation: Historic, mid-nineteenth century
Elevation: 300-315 feet MSL 91.5-96 meters MSL
Slope Direction: Southwest Slope Angle: 5-10° (River bank)
Original Water Source: Ohio River Direction: Southwest Distance: N/A
Ground Cover: Weeds and debris Visibility: 40%
Property Owner: Missouri Portland Cement Company
Map Reference: Bandanna KY-ILL, Previous Reference: None
1966

Site W-595-22 is a thin scattering of historic material located on the bank of the Ohio River at a modern barge loading facility. The long axis of the site, 600 feet (183 meters), is situated parallel to the river, but the recorded dimension is probably much greater than reality because of poor visibility and dispersion of artifacts by the river. On the basis of the material collected, a few sherds of ceramics and glass, it is not possible to determine the function of the site. From all appearances, continuous erosion and construction of the loading facility have destroyed the integrity of the site. Because the site does not appear to have any intact cultural matrix, it is unlikely that significant information could be obtained from further investigation. Cultural resource clearance is recommended for W-595-22.

PREHISTORIC

None

HISTORIC

Glass

- 1 Light green flat glass, 3 mm
- 2 Clear glass bottle fragments

Ceramics

- 1 Hard paste porcelain, plain
- 3 Ironstone, cobalt added, plain
- 1 Ironstone, cobalt added, aqua transfer print, rim
- 1 Buff paste stoneware, clear lead glazed ext., dark brown lead glaze int.

Miscellaneous

- 1 Cream plastic dish sherd, rim, plain

W-595-24▼(Figure 6) State: Illinois County: Pulaski

Cultural Affiliation: Historic, mid-nineteenth century or later

Elevation: 300-315 feet MSL 90-96 meters MSL

Slope Direction: South Slope Angle: 5-30° (River bank)

Original Water Source: Ohio River, Direction: South Distance: N/A
Possible Well

Ground Cover: None to heavy brush Visibility: 100% to 20%

Property Owner:

Map Reference: Bandanna KY-ILL, Previous Reference: None
1966

Site W-595-24 is a restricted scatter of historic ceramics and glass measuring less than 100 x 100 feet (30 x 30 meters). The material was collected from a highly disturbed area in a campground. It is likely that the material is the remains of a small dump that was probably associated with a house located near the edge of the bluff. No evidence of any structures or features were located within the survey area and all material appeared to have been secondarily deposited. Because this site does not have any intact cultural features or structures, it is unlikely that significant information could be obtained from further investigation. Cultural resource clearance is recommended for W-595-24.

PREHISTORIC

None

HISTORIC

Glass

1 Milk glass fragment

Ceramics

- 2 Ironstone, clear lead glaze, plain
- 1 Ironstone, cobalt glaze, plain
- 1 Ironstone, pink lead glaze, plain
- 1 Ironstone, clear lead glaze, rim, green-brown hand-painted underglaze (floral)
- 1 Ironstone, clear lead glaze, brown and fugitive overglaze enamel
- 1 Ironstone base, clear lead glaze, polychrome underglaze transfer print (blue-green)
- 1 Ironstone base/rim (shallow dish), clear lead glaze, fugitive polychrome overglaze transfer print
- 3 Ironstone clear lead glaze, (2 rims, 1 base), blue transfer print

W-595-26 (Figure 8) State: Kentucky County: Ballard

Cultural Affiliation: Historic, late nineteenth-early twentieth century

Elevation: 315-320 feet MSL 96-97.5 meters MSL

Slope Direction: Northwest **Slope Angle:** 45° (River bank)

Original Water Source: Ohio River Direction: Northwest Distance: 50 meters

Ground Cover: Grasses, weeds, silt **Visibility:** 60-80%

Property Owner: Unknown

Map Reference: Olmstead, ILL-KY, 1967 Previous Reference: 1911-1914 navigation chart

Site W-595-26 is a small scattering of historic ceramics and glass, extending for approximately 100 feet (30 meters) along the Kentucky bank of the Ohio River. The material appears to be eroding out of a relatively narrow zone about 20 feet (6 meters) above current pool, and well above high water easement. The artifact collections include a variety of material that indicates a wide range of activity although not a long period of time. No structural remains of features were noted by the investigators, but this does not preclude their existence in what may be an encapsulated site. Because the body of the site is well above high water easement, no recommendations can be made in this report.

PREHISTORIC

None

HISTORIC

Metal

- 1 Iron can lid
2 Pieces of wide strap iron

Class

- 3 Light blue bottle glass
- 1 Brown bottle glass
- 1 Clear bottle glass (twentieth century)
- 2 Clear bottle bases (twentieth century)
- 1 Clear stemmed goblet base, molded (twentieth century)
- 1 Dark blue bottle base (late nineteenth century)

SITE NUMBER: W-595-26 (continued)

Ceramics

- 1 Large buff paste earthenware, reddish-brown lead glaze ext./int.,
1 loop handle and 1 lug handle, unglazed rim (jar - 9 1/2" dia.,
at least 7 1/2" tall)
- 3 Buff paste earthenware, brown lead glazed ext., w/clear lead glaze
band along top, dark brown lead glaze int. (crock)
- 1 Buff paste earthenware, reddish-brown lead glazed ext./int.
(lipped rim--crock)
- 1 Buff paste earthenware, reddish-brown and white lead glazed ext.,
w/blue hand-painted decoration, brown lead glaze int.
- 1 Pink paste earthenware, clear lead glazed ext., unglazed int. (base)
- 2 Ironstone, clear lead glaze, undecorated (1 rim/base, 1 base)
- 1 Buff paste stoneware, burnished ext., light green lead glazed int.
- 1 Buff paste stoneware, gray lead glaze ext./int., blue stenciled
decoration (West..... Stone....)

W-595- 53 (Figure 8) State: Kentucky County: Ballard

Cultural Affiliation: Historic, early to mid-nineteenth century

Elevation: 310-315 feet MSL 94.5-96 meters MSL

Slope Direction: N/A Slope Angle: 0

Original Water Source: Humphrey Creek/Possible Well Direction: North/Unknown Distance: 10 meters

Ground Cover: Soybeans Visibility: 90-95%

Property Owner: Unknown

Map Reference: Olmsted ILL-KY, 1967 Previous Reference: None

Site W-595-53 is a small, 50 x 50 foot (15 x 15 meters) scatter of historic debris located on the south side of Humphrey Creek, south of Happy Hollow Lake. While very little material was present, its nature would indicate a domestic site. A review of historic maps showed no structures in the area, and no evidence of structural remains or features was noted by the investigators. The local topography indicates that some terraforming activity has occurred in the area probably associated with agricultural activity. Because the site is not within project boundaries, no recommendations will be made.

PREHISTORIC

None

HISTORIC

Ceramics

- 1 Gray paste earthenware, clear glazed ext., unglazed int.
- 5 Pearlware, plain
- 1 Pearlware (base), lavender transfer print
- 1 Ironstone, cobalt added, green shell edge decoration
- 1 Ironstone, cobalt added, blue band
- 1 Ironstone, cobalt added, blue-brown annular decoration
- 1 Ironstone, cobalt added, blue hand painting

Miscellaneous

- 1 Piece cinder

W-595- 55 ▼ (Figure 8) State: Illinois County: Pulaski

Cultural Affiliation: Historic, late nineteenth century

Elevation: 305-310 feet MSL 93-94.5 meters MSL

Slope Direction: Southeast

Slope Angle: 5-20°

Or Water Source: Ohio River Direction: Southeast Distance: 20 meters

Gr Cover: Variable, willows and Visibility: 30-60%
grass

Property Owner: Blanche B. Hood

Map Reference: Olmsted, ILL-KY, Previous Reference: None
1967

Site W-595-55 is a narrow, elongated scatter of historic material located on a natural levee of the Ohio River, between the river and a levee flank stream known as Hodges Creek. The site has a very low artifact density, but a scattering of material occurs for almost 100 feet (30 meters) along the river. It is likely that the recovered material is from a much less extensive area, but has been scattered by erosion and agricultural activity. A thorough examination of the area failed to produce any indication of structural remains or features and no structures were noted in the area on the historic maps reviewed. Because the site contains no intact deposits, it is unlikely that any significant information could be obtained from additional work. Cultural resource clearance is recommended for site W-595-55.

PREHISTORIC

None

HISTORIC

Metal

- 1 Metal key opener for can
- 1 Railroad spike
- 3 Badly rusted nails

Glass

- 2 Dark blue bottle glass
- 1 Milk glass zinc lid liner fragment (w/embossed lettering - GENUINE)
- 1 Clear container glass fragment
- 1 Reconstructed light blue bottle, rectangular, w/inset panels, snap case base, 2 mold seams, applied rim, late 1800's

Ceramics

- 1 Ironstone, clear glaze, plain (base)
- 1 Ironstone, clear glaze, molded design (rim)
- 1 Ironstone, clear glaze, polychrome tint design (rim)

W-595- 30 (Figure 9) State: Kentucky County: Ballard

Cultural Affiliation: Prehistoric, late Archaic and early Woodland; historic,
early twentieth century

Elevation: 320-325 feet MSL 97.5-99 meters MSL

Slope Direction: West

Slope Angle: 0-5°

Original Water Source: Swamp

Direction: West

Distance: 100 meters

Ground Cover: Soybeans

Visibility: 90-100%

Property Owner: Unknown

Map Reference: Barlow KY-ILL,
1977

Previous Reference: None

Site W-595-30 is a small, 200 x 50 foot (60 x 15 meters) scatter of lithic debris near the eastern edge of a large Ohio River meander scar swamp. The site, which has its long axis oriented north/south, is located southwest of the intersection of Marvin Denton and Steve Denton Roads. Analysis of the material collected gives no indication of function for the historic component, but strongly suggests primary lithic tool manufacture for the function of the prehistoric component. Similar functions were in evidence for other sites in the locale, but no readily available source of raw material was noted. Because this site is not within project boundaries, no recommendations will be made.

PREHISTORIC

- 1 Projectile point/knife
- 1 End scraper (reworked projectile point/knife)
- 6 Thin biface fragments
- 2 Spoke shaves
- 7 Retouched flakes (3 massive)
- 2 Nutting stones
- 15 Thick biface fragments (all discarded tool starts)
- 4 Hammerstones
- 6 Core fragments
- 62 Decortification flakes (60% massive)
- 18 Bifacial thinning flakes (40% massive)
- 51 Angular shatter (70% massive)
- 16 Fire cracked rocks

HISTORIC

Glass

- 1 Brown bottle glass

Ceramics

- 4 Ironstone, cobalt added (1 rim, plain)
- 1 Red earthenware, unglazed int., gray lead glaze ext.

W-595-31 (Figure 9) State: Kentucky County: Ballard

Cultural Affiliation: Prehistoric, nondiagnostic

Elevation: 320-325 feet MSL 97.5-99 meters MSL

Slope Direction: West Slope Angle: 0-5°

Original Water Source: Swamp Direction: West Distance: 100 meters

Ground Cover: Soybeans Visibility: 90-100%

Property Owner: Unknown

Map Reference: Barlow KY-ILL Previous Reference: None
1977

Site W-595-31 is a small, 75 x 75 foot (23 x 23 meters) scatter of prehistoric lithics situated east of a large Ohio River meander scar swamp. While a number of activities may be suggested by the collected material, the most heavily represented activity is lithic tool manufacture. No local source for the raw material was noted by the investigators. Because this site is not within the project area, no recommendations will be made.

PREHISTORIC

- 8 Retouched flakes
- 3 Utilized flakes
- 1 Thick biface
- 3 Hammerstones (1 massive)
- 1 Nutting stone w/multiple pits
- 9 Fire cracked rocks
- 8 Decortification flakes
- 22 Bifacial thinning flakes
- 26 Angular shatter (mostly massive)

HISTORIC

None

W-595-32 (Figure 9) State: Kentucky County: Ballard

Cultural Affiliation: Prehistoric, nondiagnostic

Elevation: 320 feet MSL 97.5 meters MSL

Slope Direction: West

Slope Angle: 0-5°

Original Water Source: Swamp

Direction: West

Distance: 50 meters

Ground Cover: Soybeans

Visibility: 90-100%

Property Owner: Unknown

Map Reference: Barlow KY-ILL,
1977

Previous Reference: None

Site W-595-32 is a moderate-sized, 200 x 150 foot (60 x 45 meters) scatter of prehistoric lithics situated east of an Ohio River meander scar swamp. The site is located in a gently rolling soybean field, west/southwest of the intersection of Marvin Denton and Steve Denton Roads. The material was randomly, but thinly, scattered across the site area with no apparent concentrations. No features or midden were noted during the investigation. Because this site is not within the project area, no recommendations will be made.

PREHISTORIC

- 3 Retouched flakes
- 1 Utilized flake
- 11 Decortification flakes (4 massive)
- 6 Bifacial thinning flakes
- 1 Hammerstone w/bipolar pitting
- 1 Thick biface fragment
- 1 Uniface "preform"
- 2 Angular shatter (massive)
- 4 Fire cracked rocks

HISTORIC

None

W-595- 34 (Figure 9) State: Kentucky County: Ballard

Cultural Affiliation: Prehistoric, nondiagnostic

Elevation: 330-350 feet MSL 100.5-105 meters MSL

Slope Direction: West Slope Angle: 45°

Original Water Source: Swamp Direction: West Distance: 30 meters

Ground Cover: Brush/Soybeans Visibility: 0-20%

Property Owner: Unknown

Map Reference: Barlow KY- ILL, Previous Reference: None
1977

Site W-595-34 is a small, 100 x 150 foot (30 x 45 meters), north-south by east-west light scatter of nondiagnostic lithic debris collected from a relatively steep bank overlooking an Ohio River meander scar swamp. The site is located on a terrace riser southwest of the end of Terrell Road. Because the main body of the site is well above easement in a very dense soybean field, no attempts were made to define site boundaries. The recovered material gives no indication of site function. Because the site is out of the project area, no recommendations will be made.

PREHISTORIC

- 3 Decortification flakes
- 3 Bifacial thinning flakes
- 1 Angular shatter
- 1 Small chunk of sandstone w/powdered red pigment on interior curve

HISTORIC

None

W-595-35 (Figure 9) State: Kentucky County: Ballard

Cultural Affiliation: Prehistoric, Mississippian

Elevation: 340 feet MSL 103.5 meters MSL

Slope Direction: East Slope Angle: 5-10°

Original Water Source: Swamp Direction: East Distance: 30 meters

Ground Cover: Soybeans Visibility: 60-100%

Property Owner: Unknown

Map Reference: Barlow KY-ILL, Previous Reference: None
1977

Site W-595-35 is a small, 200 x 200 foot (60 x 60 meters) scatter of pre-historic lithics and ceramics situated on a terrace overlooking a large meander scar swamp from the Ohio River. The site has been assigned to the Mississippian period on the basis of the presence of shell-tempered ceramics. The material collected represents only a portion of the material present, but is sufficient in quantity and variety to suggest an intense, if small, occupation. The site appears to have suffered fairly heavy agricultural damage, and is presently eroding along the terrace edge. Because the site is not within the project area, no recommendations will be made.

PREHISTORIC

- 1 Thin biface fragment, heavily fired
- 4 Utilized flakes
- 16 Retouched flakes (9 on decortification)
- 27 Fire cracked rocks
- 17 Decortification flakes
- 32 Bifacial thinning flakes
- 17 Angular shatter
- 22 Shell-tempered plain ceramics (small, heavily weathered sherds)
- 1 Bone fragment (mammal, long bone)

HISTORIC

None

W-595- 39▼⇌
(Figure 9)

State: Kentucky County: Ballard

Cultural Affiliation: Prehistoric, Woodland; historic, late nineteenth-twentieth century

Elevation: 300-315 feet MSL 91.5-94.5 meters MSL

Slope Direction: N/S Slope Angle: N/A

Original Water Source: Unknown Direction: Unknown Distance: Unknown

Ground Cover: Soybeans Visibility: 95%

Property Owner: R.A. Pate

Map Reference: Barlow KY-ILL, 1977 Previous Reference: None

Site W-595-39 is a large, 1,000 x 500 foot (305 x 150 meters), north-south by east-west thin scatter of historic and prehistoric material located near a small depression west of Honey Lake. The material was scattered randomly across the site with no apparent concentrations. While no features or midden were noted during the survey, the probability of their existence is felt to be high. For this reason, a program of limited testing will be recommended for W-595-39. This program should involve the placement of both auger tests and hand excavated test units within the boundaries of the site to determine the site's integrity and to aid in the formulation of mitigation alternatives, if necessary.

PREHISTORIC

Projectile point/knives

- 1 Small triangular Late Woodland/Mississippian
- 1 Unidentified distal end
- 1 Small mid-section fragment with shoulder

- 2 Thin bifaces
- 7 Retouched flakes
- 2 Utilized flakes
- 2 Thick bifaces
- 2 Hammerstones
- 20 Bifacial thinning flakes
- 19 Decortification flakes
- 7 Angular shatter
- 20 Fire cracked rocks

Ceramics

- 18 Grit-tempered cordmarked
- 22 Grit-tempered, plain

SITE NUMBER: W-595-39 (continued)

HISTORIC

Metal

1 Bolt and associated washer

Glass

1 Milk glass handle fragment
2 Clear glass bottle fragments
10 Green glass bottle fragments (Coca-Cola)

Miscellaneous

9 Brick fragments

W-595- 40 (Figure 9) State: Kentucky County: Ballard
Cultural Affiliation: Prehistoric, Woodland
Elevation: 310-315 feet MSL 94.5-96 meters MSL
Slope Direction: Northwest Slope Angle: 0-5°
Original Water Source: Ohio River Direction: Northwest Distance: 300 meters
Ground Cover: Corn, soybeans Visibility: 60-80%
Property Owner: Elizabeth Lanier
Map Reference: Barlow KY-ILL, Previous Reference: None
1977

Site W-595-40 is a small, 200 feet (60 meters) north/south by 100 feet (30 meters) east/west scatter of lithics and ceramics located on the back side of a levee flank depression. Material was randomly scattered across the site and no evidence of features or midden was noted on the surface. It should be noted that the lack of surface evidence of intact deposits does not preclude their existence. Chronological placement in the Woodland period is based on the presence of grit-tempered ceramics. Only one sherd has clear surface treatment, and this does not allow for more precise placement. Because the site is not within the project boundaries, no recommendations will be made.

PREHISTORIC

- 2 Projectile Point/Knives, mid-section fragments
- 5 Retouched flakes (1 on decortification flake)
- 3 Utilized decortification flakes
- 2 Core fragments
- 1 Thick biface
- 11 Fire cracked rocks
- 39 Bifacial thinning flakes
- 11 Angular shatter

Ceramics

- 50 Grit-tempered, plain
- 1 Grit-tempered, linear incised
- 1 Grit-tempered, possible brushed
- 4 Grit-tempered, possible cordmarked

HISTORIC

None

W-595-42 (Figure 9) State: Kentucky County: Ballard

Cultural Affiliation: Historic, late nineteenth-early twentieth century

Elevation: 305-310 feet MSL 93-94.5 meters MSL

Slope Direction: Northeast Slope Angle: 0-5°

Original Water Source: Deep Slough/ Direction: East/Unknown Distance: 30 meters/
Possible Well Unknown

Ground Cover: Soybeans Visibility: 70-90%

Property Owner: Grace Horn

Map Reference: Barlow KY-ILL, Previous Reference: None
1967

Site W-595-42 is a small, 50 x 50 foot (15 x 15 meters) scatter of historic ceramics and glass located on a relatively level area to the west of Deep Slough northeast of Holloway Landing Road. The material on the site was randomly scattered with no readily discernible pattern. Additional investigation on the site failed to produce any evidence of a structure or features, and no structures were shown in this area on the historic maps consulted. Because the site is not within the easement, no recommendations will be made.

PREHISTORIC

None

HISTORIC

Metal

1 Nail fragment

Glass

6 Light blue bottle glass (1 screw rim)
3 Lavender bottle glass
2 Clear bottle glass
3 Light green bottle glass
1 Milk glass

Ceramics

1 Buff paste earthenware, clear lead glaze int./ext.
1 Buff paste earthenware, blue lead glaze ext.
2 Buff paste earthenware, dark brown lead glaze ext./int.
1 Buff paste stoneware, clear salt glaze ext., dark brown slipped int.
1 Gray stoneware, clear lead glaze ext./int.
8 Ironstone, clear lead glaze, plain
1 Ironstone, clear lead glaze, molded rim
1 Ironstone, clear lead glaze, polychrome overglaze transfer print
2 Ironstone, cobalt added, plain
1 Hard-paste porcelain, red overglaze transfer print

W-595- 43 (Figure 9) State: Kentucky County: Ballard

Cultural Affiliation: Prehistoric, nondiagnostic; historic, isolated find

Elevation: 315-320 feet MSL 96.97.5 meters MSL

Slope Direction: West Slope Angle: 0-5°

Original Water Source: Swamp Direction: West Distance: 100 meters

Ground Cover: Soybeans Visibility: 60-70%

Property Owner: Unknown

Map Reference: Barlow KY-ILL, Previous Reference: None
1977

Site W-595-43 is a moderate-sized, 200 x 100 foot (60 x 30 meters) scatter of prehistoric lithic material, situated to the east of a large Ohio River meander scar swamp. The site, which has its long axis oriented roughly north/south, is located west of the intersection of Marvin Denton and Steve Denton Roads. No concentrations of material were noted on the site, and no features or midden were in evidence. Because the site is not within the project boundaries, no recommendations will be made.

PREHISTORIC

- 3 Retouched flakes
- 2 Utilized flakes
- 1 Core fragment
- 3 Thick biface fragments
- 29 Decortification flakes
- 30 Bifacial thinning flakes
- 6 Angular shatter

HISTORIC

Ceramics

- 1 Buff paste earthenware, red-brown lead glaze int./ext.

W-595- 44 (Figure 9) State: Kentucky County: Ballard

Cultural Affiliation: Historic, mid-nineteenth-early twentieth century

Elevation: 310-315 feet MSL 94.5-96 meters MSL

Slope Direction: East

Slope Angle: 0-10°

Original Water Source: Probable
Well

Direction: Unknown

Distance: Unknown

Ground Cover: Soybeans, farm road

Visibility: 60-95%

Property Owner: Unknown

Map Reference: Barlow KY-ILL.,
1977

Previous Reference: None

Site W-595-44 is a moderate-sized, 200 x 150 foot (60 x 45 meters), north/south by east/west scatter of historic material located in the northeast corner of a soybean field southwest of Clear Pond. The site is situated along the west edge of a levee flank swamp. The material collected suggests a domestic structure although none are shown on the historic maps of the area. Local residents said that at one time, numerous small shacks or shanties were present in the "bottoms." No structural remains or features were noted by the investigators. Because the site is not within the project area, no recommendations will be made.

PREHISTORIC

None

HISTORIC

Metal

- 1 Iron ring, flattened on 1 end
- 1 Strap iron fragment

Glass

- 2 Light green flat glass
- 1 Brown bottle glass
- 1 Lime green bottle glass
- 2 Olive green bottle glass
- 5 Milk glass fragments
- 1 Yellowish bottle glass, embossed lettering
- 11 Light blue bottle glass
- 19 Aqua bottle glass (screw rim)
- 28 Clear bottle glass (2 molded rims, 1 screw rim)
- 1 Water glass rim, clear
- 18 Lavender bottle glass (1 applied rim - 1880-1913)

SITE NUMBER: W-595-44 (continued)

Ceramics

- 6 Buff paste earthenware, dark brown lead glaze ext./int. (unrelated, 1 handle, 2 bases)
- 1 Gray paste earthenware, dark brown slipped int./ext.
- 2 Buff paste earthenware, white lead glaze ext., dark brown slipped int.
- 7 Buff paste earthenware, gray lead glaze ext., dark brown lead glaze int. (unrelated)
- 1 Buff paste earthenware, white lead glaze ext., dark brown lead glaze int.
- 6 Buff paste earthenware, gray lead glaze ext./int.
- 2 Pearlware, blue transfer print
- 8 Ironstone, clear lead glaze, plain
- 24 Ironstone, cobalt added, plain
- 1 Ironstone, clear lead glaze, brown glazed rim
- 1 Ironstone, clear lead glaze, molded
- 2 Ironstone, cobalt added, blue transfer print
- 2 Soft-paste porcelain handle fragments
- 1 Hard-paste porcelain, plain
- 1 Hard-paste porcelain, red overglaze transfer print
- 1 Soft-paste porcelain, underglaze blue transfer print, portion of painted maker's mark

Miscellaneous

- 2 Mussel shell fragments
- 2 Brick fragments

W-595- 45 (Figure 9) State: Kentucky County: Ballard

Cultural Affiliation: Prehistoric, nondiagnostic

Elevation: 315 feet MSL 96 meters MSL

Slope Direction: N/A

Slope Angle: N/A

Original Water Source: Clear Pond Direction: Northwest Distance: 500 meters

Ground Cover: Soybeans Visibility: 50%

Property Owner: Unknown

Map Reference: Barlow KY-ILL,
1977

Previous Reference: None

Site W-595-45 is a moderate-sized, 150 x 150 foot (45 x 45 meters) scatter of prehistoric lithics situated on a relatively level area of Barlow Bottoms. The site is located west of a levee flank swamp known as Clear Pond, east of Sallie Crice Road, and south of its intersection with Wildlife Lodge Road. Visibility at the time of survey was limited by a dense crop of soybeans, but material concentrations appeared to be low with no features or midden evident. Lack of surface evidence for features and midden does not indicate that buried deposits do not exist. Because the site is not within project boundaries, no recommendations will be made.

PREHISTORIC

- 2 Thin biface fragments
- 3 Retouched flakes
- 2 Utilized flakes
- 1 Thick biface fragment
- 7 Decortification flakes
- 17 Bifacial thinning flakes
- 6 Fire cracked rocks

HISTORIC

None

W-595- 46▼ (Figure 9) State: Kentucky County: Ballard

Cultural Affiliation: Historic, mid-nineteenth-early twentieth century

Elevation: 310-315 feet MSL 94.5-96 meters MSL

Slope Direction: Southeast

Slope Angle: 0-5°

Original Water Source: Probable
Well

Direction: Unknown

Distance: Unknown

Ground Cover: Soybeans

Visibility: 60%

Property Owner: Cleo M. Parsons

Map Reference: Barlow KY-ILL,
1977

Previous Reference: None

Site W-595-46 is a small, 75 x 75 foot (23 x 23 meters), but dense, scatter of historic ceramics and glass situated near a small section of a dry back-swamp depression. Analysis of the collected material suggests a domestic occupation dating from the mid-nineteenth to the early twentieth century. A thorough investigation of the area failed to produce any evidence of features or structural remains even though visibility was relatively good. Examination of historic maps for the area show no sites at this location, but local residents said that numerous tenant shacks and shanties were located in the area. The nature and quality of the material collected suggest a somewhat higher standard of living than one would normally associate with a tenant farmer, possibly indicating a land owner. Because there are no visible structural remains at W-595-46, and there is no evidence of features or intact deposits, it is unlikely that significant information could be obtained from this agriculturally damaged site. Cultural resource clearance is recommended for site W-595-46.

PREHISTORIC

None

HISTORIC

Metal

2 Flat pieces of iron

Glass

2 Clear bottle glass, 1 w/embossed printing

3 Brown bottle glass

12 Lavender bottle glass (2 base pieces w/molded starburst design)

3 Yellowish bottle glass

1 Light green bottle neck (applied)

6 Blue-green bottle glass (1 rim, applied-- 1880-1900)

1 Blue-green window glass

1 Milk glass base w/embossed starburst design

SITE NUMBER: W-595-46 (continued)

Ceramics

- 2 Buff paste coarse earthenware, reddish-brown glazed ext., dark brown glazed int.
- 13 Buff paste coarse earthenware, brown glazed int./ext. (2 bases)
- 3 Gray paste coarse earthenware, brown glazed int./ext.
- 2 Gray paste earthenware, yellowish glazed ext., brown slipped int. (rim, base)
- 2 Gray paste earthenware, red-brown lead glazed ext., dark brown lead glaze int.
- 2 Buff paste earthenware, brown glazed ext., yellow slipped int.
- 2 Gray paste earthenware, yellowish glazed ext., greenish-brown slipped int.
- 1 Gray paste earthenware, yellowish glazed ext., grayish-brown slipped int.
- 1 Gray paste earthenware, tan glazed ext., dark brown glazed int.
- 1 Gray paste earthenware, unglazed ext., dark brown glazed int.
- 1 Gray paste earthenware, unglazed ext., yellowish-brown glazed int.
- 4 Buff paste earthenware, reddish-brown glazed ext., dark brown lead glazed int.
- 1 Buff paste earthenware, reddish-brown lead glazed ext.
- 4 Buff paste stoneware, clear salt glaze ext., dark brown slipped int.
- 1 Gray paste stoneware, clear salt glaze ext., medium brown slipped int.
- 2 Dark gray/brown stoneware, clear salt glaze ext., unglazed int.
- 1 Buff paste stoneware, yellow salt glaze ext., dark brown lead glaze int.
- 2 Gray paste stoneware, dark brown lead glaze ext./int.
- 1 Gray paste stoneware, clear glazed ext., medium brown slipped int.
- 1 Pink stoneware, unglazed ext., dark tan slipped int. (brown)
- 1 Pearlware rim, plain
- 5 Ironstone, clear lead glaze, plain
- 21 Ironstone, cobalt added, plain (5 bases - at least 2 vessels, 6 rims)
- 2 Ironstone, cobalt added, bases w/maker's mark
- 1 Ironstone, cobalt added, molded design
- 1 Ironstone, cobalt added, brown underglaze hand painting
- 1 Soft-paste porcelain, bisque, flat vessel fragment
- 1 Soft-paste porcelain, glazed, doll head fragment

Miscellaneous

- 5 Brick fragments
- 1 Chunk quartz

W-595- 56 ▼ ⇄
(Figure 9)

State: Illinois County: Pulaski

Cultural Affiliation: Prehistoric, Woodland/Mississippian; historic, early twentieth century

Elevation: 290-305 feet MSL 88.5-93 meters MSL

Slope Direction: Southeast Slope Angle: 14-45° (River bank)

Original Water Source: Ohio River Direction: Southeast Distance: N/A

Ground Cover: Grasses, weeds, silt Visibility: 10-40%

Property Owner: Unknown

Map Reference: Barlow KY-ILL, Previous Reference: None
1977

Site W-595-56 is an elongate scatter of historic and prehistoric material eroding from the Illinois bank of the Ohio River upstream of the Ohio River-Hess Bayou confluence. The material is scattered along the sloping foot of a steep bank for approximately 300 feet (90 meters). Because of poor visibility caused by dense vegetation and siltation, it was not possible to locate any source for the material, but it appears that it may be eroding from a zone within the proposed easement. Examination of a soybean field that extends to the edge of the bank above the site failed to produce any material, either historic or prehistoric, indicating that the site may be encapsulated. Chronological placement of the site in the Woodland and Mississippian periods is based on a very limited sample of ceramics consisting of only seven sherds and must be viewed as tentative. No indication of site function is suggested by the limited prehistoric assemblage. Examination of the historic artifacts suggests a domestic site dating to the early twentieth century. A program of limited testing will be recommended to determine if an encapsulated deposit exists, and if so, whether it is within the high water easement.

PREHISTORIC

Lithics

- 1 Utilized flake
- 1 Decortification flake
- 2 Bifacial thinning flakes

Ceramics

- 1 Shell-tempered plain
- 4 Grit-tempered plain
- 2 Grit-tempered cordmarked

HISTORIC

Glass

- 1 Flat glass, bluish tint, 5 mm
- 2 Milk glass bases, w/embossed lettering - OVENWARE, Made in USA
- 2 Milk glass canning lid liners
- 3 Milk glass dish fragments
- 2 Opaque light green dish fragments
- 1 Yellowish bottle base (1920-)
- 3 Aqua bottle glass (1 mason's jar rim - molded, 1 applied rim)

Ceramics

- 1 Unglazed coarse red earthenware (rim - flower pot)
- 1 Buff paste earthenware, grayish lead glaze ext., dark brown lead glaze int.
- 1 Buff paste earthenware, grayish-tan glazed ext., yellow lead glaze int.
- 1 Buff paste earthenware, bluish-green lead glaze ext., green lead glaze int. (rim)
- 1 Ironstone, aqua lead glaze
- 1 Ironstone, no glaze
- 6 Ironstone, clear glaze, plain (3 molded rims)
- 2 Ironstone, cobalt added, plain

W-595- 28 ▼ (Figure 10) State: Kentucky County: Ballard

Cultural Affiliation: Prehistoric, nondiagnostic; historic, early twentieth century

Elevation: 310 feet MSL 94.5 meters MSL

Slope Direction: North

Slope Angle: 0-5°

Original Water Source: Sodom Creek/ Direction: Northwest/ Distance: 10 meters/
Possible Well Unknown Unknown

Ground Cover: Soybeans Visibility: 40-50%

Property Owner: Unknown

Map Reference: Barlow KY-ILL, Previous Reference: None
1977

Site W-595-28 is a small, 50 x 50 foot (15 x 15 meters) scatter of historic and prehistoric material recovered from a soybean field on the north bank of Sodom Creek, east of its present confluence with a stream that connects Clear Lake and Fish Lake. It would appear that Sodom Creek has been channelized in this area and its original location is unknown. A thorough walkover of the area failed to produce any evidence of structural remains, and no features or midden were noted. It is probable that the channelization of Sodom Creek and the associated terraforming activity have destroyed all of the deposits at this site. Because of the recent nature of the historic material, paucity of prehistoric material, and lack of structural remains or features, either historic or prehistoric, it is unlikely that any significant information could be obtained from further work. Cultural resource clearance is recommended for site W-595-28.

PREHISTORIC

3 Bifacial thinning flakes

HISTORIC

Glass

- 4 Lavender bottle glass (1 rim - molded, 1920-1925)
- 1 Brown bottle glass (twentieth century)
- 2 Aqua bottle glass
- 2 Light blue-green bottle glass
- 1 Clear bottle glass (Smirnoff Vodka)

Ceramics

- 4 Buff paste coarse earthenware, clear lead glaze (2 basal sherds)
- 1 Buff paste earthenware, white lead glaze ext., dark brown lead glaze int.
- 1 Ironstone cup fragment (mended), clear lead glaze
- 1 Ironstone saucer sherd (mended), clear lead glaze, molded rim
- 7 Ironstone sherds, cobalt added
- 1 Buff paste stoneware, white and brown salt glaze ext., dark brown-black salt glaze int.
- 1 Buff paste stoneware, clear lead glaze ext., dark brown lead glaze int.

W-595- 29 (Figure 10) State: Kentucky County: Ballard

Cultural Affiliation: Prehistoric, nondiagnostic; historic, late nineteenth century

Elevation: 310-315 feet MSL 94.5-96 meters MSL

Slope Direction: Northeast

Slope Angle: 0-5°

Original Water Source: Fish Lake/
Possible Well

Direction: East/Unknown Distance: 10 meters/
Unknown

Ground Cover: Soybeans

Visibility: 60-100%

Property Owner: Unknown

Map Reference: Barlow KY-ILL,
1977

Previous Reference: None

Site W-595-29 is a small, 75 x 75 foot (23 x 23 meters) scatter of historic and prehistoric material located on the west side of Fish Lake, north of Holloway Landing Road. It is not known whether Fish Lake was an actual levee flank lake or a swamp during the time of occupation, either historic or prehistoric, and the lake appears to have extended northward since the map was compiled in 1977. Examination of the collected artifacts indicates that the site was the location of a historic domestic structure, although none are shown on historic maps. Analysis of the prehistoric material indicates a small extractive site, probably a hunting camp. Because the site is not within the project area, no recommendations will be made.

PREHISTORIC

- 1 Thin biface fragment
- 1 End scraper fragment (hafted)
- 1 Retouched flake
- 2 Utilized flakes
- 1 Decortification flake
- 15 Bifacial thinning flakes
- 1 Angular shatter

HISTORIC

Metal

- 2 Iron nonidentified artifact fragments

SITE NUMBER: W-595-29 (continued)

Glass

- 4 Lavender bottle glass (2 rims-- 1 applied lip, 1880-1913, and 1 molded, 1920-1925)
- 2 Molded dark blue bottle glass
- 1 Brown bottle glass
- 2 Light blue bottle glass
- 4 Light green bottle glass
- 8 Clear bottle glass (4 molded body sherds, 1 plain body fragment, 1 embossed base-- Duraglas, 1903- , 2 rims-- 1 applied rim, late 1800's, 1 molded rim, 1903-)
- 5 Milk glass zinc lid liner fragments
- 3 Milk glass fragments
- 2 Milk glass bottle bases
- 2 Milk glass dish fragments

Ceramics

- 1 Ironstone, clear lead glaze, rim
- 1 Ironstone, clear lead glaze int., brown lead glaze ext.
- 1 Ironstone, clear lead glaze, maker's mark--"Golden Wheat"
- 1 Ironstone, clear lead glaze, black transfer print
- 1 Ironstone, clear lead glaze, black transfer print overglaze
- 1 Ironstone, clear lead glaze, green hand painted
- 2 Ironstone, clear lead glaze, blue transfer print
- 2 Ironstone, aqua lead glaze
- 1 Buff paste stoneware, dark brown lead glaze int., clear lead glaze ext.

Miscellaneous

- 1 Phonograph record fragment
- 1 Glass slag

W-595-33 (Figure 10) State: Kentucky County: Ballard

Cultural Affiliation: Prehistoric, Woodland; historic, nineteenth-twentieth century

Elevation: 310-315 feet MSL 94-96 meters MSL

Slope Direction: Northwest Slope Angle: 5-10°

Original Water Source: Swamp/ Direction: West/Unknown Distance: N/A
Probable Well Unknown

Ground Cover: Freshly plowed Visibility: 95%

Property Owner: Unknown

Map Reference: Barlow KY-ILL, Previous Reference: None
1977

Site W-595-33 is a small, 50 x 50 foot (15 x 15 meters) scatter of historic and prehistoric material located at the base of a terrace riser overlooking a large Ohio River meander scar swamp. The site is located on the east edge of the swamp north of Holloway Landing Road. The position of the site in relation to the meander scar and riser indicate that occupation occurred after the channel was abandoned. The presence of grit-tempered ceramics on the site place it chronologically in the Woodland, but the cordmarking is not sufficiently diagnostic for further refinement. The historic ceramics are suggestive of domestic use, but the limited quantity, along with the absence of glass or nails, makes this function uncertain. No structural remains, features, or midden were observed at the site, but this does not rule out their existence. Because this site is not within project boundaries, no recommendations will be made.

PREHISTORIC

- 1 Retouched decortification flake
- 3 Utilized flakes (1 on decortification flake)
- 7 Bifacial thinning flakes
- 5 Decortification flakes

HISTORIC

Ceramics

- 2 Grit-tempered cordmarked
- 5 Grit-tempered, plain
- 2 Mammalian skull fragments
- 1 Whiteware, plain
- 5 Ironstone, clear lead glaze, plain
- 1 Ironstone, cobalt added

W-595- 38 (Figure 10) State: Kentucky County: Ballard

Cultural Affiliation: Historic, late nineteenth-early twentieth century

Elevation: 310 feet MSL 94.5 meters MSL

Slope Direction: N/A Slope Angle: 0

Original Water Source: Probable Well Direction: Unknown Distance: Unknown

Ground Cover: Freshly plowed Visibility: 90-100%

Property Owner: Unknown

Map Reference: Barlow KY-ILL, 1977 Previous Reference: None

Site W-595-38 is a small, 50 x 50 foot (15 x 15 meters) scatter of historic ceramics and glass located on the north side of a dirt road, northwest of the bridge over Fish Lake. The material was scattered randomly in the freshly plowed field, and no evidence of structures or features were noted. No structures were noted on the historic maps for the area. Local informants stated that the bottom lands once had numerous "shanties" and tennant shacks. Because site W-595-38 is not located within the project area, no recommendations will be made.

PREHISTORIC

None

HISTORIC

Metal

1 Nonidentified iron artifact

Glass

- 4 Dark lavender bottle glass, embossed lettering, molded rim, ring-on-base (1920-1925)
- 3 Light lavender bottle glass
- 2 Yellowish bottle glass
- 2 Clear bottle glass
- 2 Light blue bottle glass
- 1 Aqua bottle glass

Ceramics

- 8 Ironstone, cobalt added, plain (2 rims, 1 base w/markers mark)
- 1 Buff paste earthenware, clear lead glaze ext., dark brown lead glaze int.
- 1 Hard-paste porcelain, polychrome overglaze transfer print

W-595- 41 (Figure 10) State: Kentucky County: Ballard

Cultural Affiliation: Historic, late nineteenth-early twentieth century

Elevation: 310 feet MSL 94.5 meters MSL

Slope Direction: N/A Slope Angle: 0

Original Water Source: Deep Slough/ Direction: West/Known Distance: 20 meters
Possible Well

Ground Cover: Soybeans Visibility: 75%

Property Owner: Bower Properties, Inc.

Map Reference: Barlow KY-ILL, Previous Reference: None
1977

Site W-595-41 is a small, 30 x 30 foot (9 x 9 meters) scatter of historic glass and ceramics, located on a level section of floodplain, east of Deep Slough and north of Holloway Landing Road. All of the recovered material was collected from a disturbed context. Examination of the site area produced no evidence of features or structural remains, and historic maps show no structures in the area. Because the site is not within project boundaries, no recommendations will be made.

PREHISTORIC

None

HISTORIC

Glass

- 1 Dark blue bottle glass
- 1 Lavender bottle glass
- 1 Light blue bottle glass
- 1 Milk glass zinc lid liner fragment

Ceramics

- 2 Ironstone, cobalt added, plain (1 rim)
- 1 Ironstone, cobalt added, heavy platter rim, medium blue transfer print border

W-595- 36
(Figure 11)

State: Kentucky County: Ballard

Cultural Affiliation: Prehistoric, Late Woodland/Mississippian; historic,
mid-nineteenth-early twentieth century

Elevation: 310 feet MSL 94.5 meters MSL

Slope Direction: Northeast

Slope Angle: N/A

Original Water Source: Deep Slough/ Direction: Northeast/ Distance: 25 meters/
Possible Well Unknown Unknown

Ground Cover: Soybeans Visibility: 95%

Property Owner: Sam G. Jones

Map Reference: Cairo ILL-KY,
1978

Previous Reference: None

Site W-595-36 is a small, 150 x 100 foot (45 x 30 meters) scatter of pre-historic and historic material located on the west side of Deep Slough. The chronological placement of the site in the Late Woodland/Mississippian period is based on the presence of a single small triangular projectile point. While it is possible that the site is associated with 15Ba 2 and 15Ba 14, both of which are located directly across the slough, the exotic nature of the lithic debris would argue otherwise. Virtually all of the lithic material noted at 15Ba 2 and 15Ba 14 was of local origin, either tan cobble chert or a gray fossiliferous chert. All of the material at W-595-36, except for three bifacial thinning flakes, the backed knife, and two angular shatter are of a very fine-grained, milky white chert for which no local source was observed. The nature of the prehistoric material at this site suggests a hunting camp. While no features or midden were observed, their existence should not be precluded. The nature of the historic material suggests a domestic site although none are shown on historic maps. Because the site is not within the project boundaries, no recommendations will be made.

PREHISTORIC

(Most lithic material is exotic, primarily milky white chert)

Projectile point/knives

- 1 Small triangular (Late Woodland/Mississippian)
- 1 Distal end

- 1 Backed knife (triangular)
- 21 Bifacial thinning flakes
- 5 Angular shatter

HISTORIC

Glass

- 1 Purple bottle glass, base
- 3 Lavender bottle glass
- 1 Clear bottle glass
- 1 Brown bottle glass

SITE NUMBER: W-595-36 (continued)

Ceramics

- 1 Buff paste earthenware, clear lead glaze ext., reddish-brown lead glaze int.
- 1 Buff paste, dark brown slipped int., brown lead, pink glaze ext.
- 1 Buff paste earthenware brown slipped ext., red-brown slipped int.
- 3 Buff paste earthenware, dark brown slipped int./ext.
- 2 Buff paste earthenware, clear lead glaze ext., medium brown slipped int.
- 2 Pearlware, plain
- 20 Ironstone, cobalt added (4 rims, 6 bases - 2 w/maker's marks, "Turner"-- embossed, "E CHINA"--painted)
- 2 Soft-paste porcelain, 1 rim

Miscellaneous

- 4 Brick fragments

W-595-49 ▼ (Figure 11) State: Kentucky County: Ballard

Cultural Affiliation: Historic, mid-nineteenth-early twentieth century

Elevation: 300 feet MSL 91.5 meters MSL

Slope Direction: Northwest

Slope Angle: 10-15°

Original Water Source: Ohio River/ Possible Well	Direction: Northwest/ Unknown	Distance: N/A Unknown
Ground Cover: None, exposed beach	Visibility: 95-100%	

Property Owner: Charles Crawford

Map Reference: Cairo ILL-KY-MO, 1978 Previous Reference: None

Site W-595-49 is a moderate-sized, 75 foot (23 meters) southwest/northeast by 40 foot (12 meters) southeast/northwest, site located on the Kentucky bank of the Ohio River, across from the Mound City Towhead. The site is located on the bank of a formation known as Cache Island, although the bank channel is a dead slough until high water (305 feet MSL +). The material from the site was recovered from an exposed section of beach and no specific source could be located. It is possible that a house was located in the vicinity of the site, but none were indicated on historic maps. A thorough examination of the area failed to produce any indication of features or structural remains. Because the site does not appear to contain any intact cultural remains, it is unlikely that significant information could be obtained from additional work. Cultural resource clearance is recommended for site W-595-49.

PREHISTORIC

None

HISTORIC

Glass

- 1 Clear flat glass
- 2 Lavender bottle glass
- 1 Milk glass container fragment

Ceramics

- 1 Buff paste earthenware, dark brown glazed ext./int. (partial base)
- 2 Ironstone, cobalt added, plain (1 base)
- 1 Ironstone, cobalt added, polychrome underglaze handpainting
- 1 Red paste refined stoneware, dark brown lead glaze ext./int.

Miscellaneous

- 1 Burnt bone fragment

W-595- 50 (Figure 11) State: Kentucky County: Ballard

Cultural Affiliation: Historic, late nineteenth - twentieth century

Elevation: 315 feet MSL 96 meters MSL

Slope Direction: Northwest Slope Angle: 5-10°

Original Water Source: Probable Well Direction: Unknown Distance: Unknown

Ground Cover: Variable, dirt road and woods Visibility: 100% road, 10-15% in woods

Property Owner: Grace Horn

Map Reference: Cairo ILL-KY-MO 1978 Previous Reference: None

Site W-595-50 is a small, 50 x 50 foot (15 x 15 meters) scatter of historic glass and ceramics located on a levee remnant northeast of Holloway Landing. The material was recovered from a disturbed area and a dirt road that parallels the Cache Island back channel. Several houses are shown in this area on the 1911-1914 navigation charts although they no longer exist. The material may be associated with one or more of them. It is also possible that some of this material has been recently deposited by individuals using Holloway Landing. Because this site is not within the project area, no recommendations will be made.

PREHISTORIC

None

HISTORIC

Glass

- 5 Fragments flat green glass (Two 2 mm and three 1 1/2 mm)
- 1 Milk glass zinc lid liner fragment
- 3 Clear bottle glass
- 2 Blue-green bottle glass

Ceramics

- 4 Gray paste stoneware (1 rim), brown-black lead glaze int. & ext.

W-595- 51 (Figure 11) State: Kentucky County: Ballard

Cultural Affiliation: Historic, early twentieth century

Elevation: 310-315 feet MSL 94.5-96 meters MSL

Slope Direction: Northwest

Slope Angle:

Original Water Source: Probable Well Direction: Unknown

Distance: Unknown

Ground Cover: None, recently
cleared

Visibility: 100%

Property Owner: Douglas E. Garret, Sr.

Map Reference: Cairo ILL-KY-MO
1978

Previous Reference: None

Site W-595-51 is a small, 50 x 50 foot (15 x 15 meters) scatter of historic debris that was collected from a recently cleared area northeast of W-595-50, on the same road. Most of the material was recovered from "relatively" undisturbed areas around the edge of the clearing and from the spoil piles. A structure is indicated in this area on the 1911-1914 navigation charts, but no structural remains were present. In all probability, the recent clearing activity would have obliterated any structural remains. A small raised cabin is located less than 100 feet (30 meters) northeast of W-595-51, and some of the more recent material may be related. Because the site is not within the project area, no recommendations will be made.

PREHISTORIC

None

HISTORIC

Metal

1 Metal cylinder w/rim

Glass

1 Molded milk glass jar, 2 x 1 1/2" (Musterole, Cleveland)
1 Old Spice bottle fragment
6 Clear glass container glass
1 Blue-green bottle glass
2 Lavender bottle glass
1 Milk glass zinc lid liner fragment

Ceramics

1 Coarse earthenware, red paste, tile fragment
13 Ironstone, clear lead glaze, plain (4 rims, 2 bases)
2 Ironstone, cobalt added, plain (2 bases)
3 Ironstone, clear lead glaze, polychrome transfer print (1/2 teacup)
1 Ironstone, medium blue glaze w/dark blue sponge decoration

W-595- 54 ▼ (Figure 11) State: Illinois County: Pulaski

Cultural Affiliation: Historic, early to mid-twentieth century

Elevation: 295-300 feet MSL 90-91.5 meters MSL

Slope Direction: Southeast Slope Angle: 5-15°

Original Water Source: Ohio River Direction: Southeast Distance: N/A

Ground Cover: None, eroding beach Visibility: 100% in nonsilted areas

Property Owner: Mound City

Map Reference: Cairo, ILL-KY-MO, Previous Reference: None
1967

Site W-595-54 is a moderate-sized, 200 foot (60 meters) southwest/north-east by 50 foot (15 meters) southeast/northwest scatter of historic ceramics at the Mound City public landing. The material was collected from a stretch of eroded beach upstream of the boat ramps. Historic maps indicate that the area of the site has been used as a landing since the mid- to late nineteenth century. No exact date is known, but it would appear that the concrete boat ramps were built sometime after 1950. Close examination of the area failed to produce a single source for the artifacts, and it would appear that no intact deposits exist. It is unlikely that any significant information could be obtained from additional investigation. Cultural resource clearance is recommended for site W-595-54.

PREHISTORIC

None

HISTORIC

Glass

- 4 Light blue bottle glass
- 1 Aqua bottle glass (base)

Ceramics

- 1 Buff paste earthenware, off white lead glaze ext./int. (rim)
- 1 Buff paste earthenware, clear lead glaze ext., dark brown lead glaze int.
- 2 Ironstone, clear lead glaze, plain
- 1 Ironstone, cobalt added, blue sponge decoration
- 1 Ironstone, cobalt added, blue transfer print (rim)
- 1 Gray paste stoneware, clear salt glaze ext., dark brown lead glaze int.
- 1 Soft-paste porcelain, plain, glazed (rim)
- 1 Soft-paste porcelain, rim-base, black lead glazed w/white lead glaze spatter decoration
- 1 Hard-paste porcelain, w/yellowish lead glaze (rim) - molded design

15Ba 14 (Figure 11) State: Kentucky County: Ballard

Cultural Affiliation: Prehistoric, Late Woodland and Mississippian; historic,
late nineteenth-early twentieth century

Elevation: 315-320 feet MSL 96-97.5 meters MSL

Slope Direction: West

Slope Angle: 5-10°

Original Water Source: Sandy
Slough

Direction: West

Distance: 100 meters

Ground Cover: Soybeans

Visibility: 60-100%

Property Owner: Sam G. Jones

Map Reference: Cairo ILL-KY,
1978

Previous Reference: KY site files

Site 15Ba 14 is a major Woodland and Mississippian village site with the latter occupation most likely associated with the "Twin Mounds" (15Ba 2). A historic component is also present. A brief walkover of the site to assess its condition showed only a slight lessening of material between the two sites and indications that additional work should be conducted to establish site boundaries. In an area where a road cuts through a small rise, a midden deposit was noted, containing bone, shell, charcoal, lithics, and ceramics. While no features or remains of historic structures could be positively identified in the sandy plowed soil, small heavy concentrations of material indicate that some features may be suffering agricultural damage. While site 15Ba 14 is obviously a major archaeological site containing intact deposits, it is not within project boundaries, and no recommendations can be made in this report.

PREHISTORIC

- 1 Projectile point/knife base (unidentified)
- 1 Thumbnail scraper
- 25 Retouched flakes
- 1 Limestone hoe
- 1 Possible chipped stone hoe (chert/cortex on one side)
- 2 Core fragments
- 5 Thick bifaces
- 25 Bifacial thinning flakes
- 11 Decortification flakes
- 3 Fire cracked rocks

15Ba 14 (continued)

Ceramics

- 33 Grit-tempered, plain
- 5 Grog-tempered, plain
- 16 Grit-tempered, cordmarked
- 9 Grog-tempered, cordmarked
- 3 Grit-tempered, incised (heavily eroded)
- 3 Grit-tempered, possibly fabric-impressed
- 3 Grit-tempered, plain rim sherds
- 3 Grit-tempered, thumbnail-incised rim sherds
- 2 Shell-tempered, plain

HISTORIC

Metals

- 1 Iron artifact, possibly door latch eye

Glass

- 1 Clear glass bottle base, 1920-
- 1 Light green bottle glass, w/mold seam
- 1 Light green bottle glass, w/embossed lettering
- 1 Light green bottle glass
- 1 Light blue bottle base (1906-)
- 1 Blue bottle base, w/iron residue on pontil (1840-1880)

Ceramics

- 1 Whiteware basal sherd, plain
- 1 Pearlware basal sherd, plain
- 1 Semi-porcelain rim sherd, plain
- 1 Buff paste stoneware, cream lead glaze ext., dark brown lead glaze int., base
- 1 Buff stoneware, unglazed
- 1 Tan paste stoneware, dark brown slipped int.
- 1 Tan paste stoneware, red-brown lead glaze ext., dark brown lead glaze int.
- 1 Gray stoneware, clear salt glaze ext., dark brown slipped int.

11Pu 140 ▽⇌ (Figure 11) State: Illinois County: Pulaski
(Mound City Marine Ways)
Cultural Affiliation: Historic, mid-nineteenth to mid-twentieth century
Elevation: 290-320 feet MSL 88.5-97.5 meters MSL
Slope Direction: Southeast Slope Angle: N/A
Original Water Source: Ohio River Direction: Southeast Distance: N/A
Ground Cover: N/A Visibility: Good
Property Owner: Unknown
Map Reference: Cairo, ILL-KY, Previous Reference: See Historic Overview
1967 and ILL. site files

The Mound City Marine Ways (11Pu 140) were built between 1857 and 1859 by the Emporium Company. The ways were used during the Civil War and three Eads Class ironclads were built here. It would appear that the ways have been modified during this century to accomodate the construction of barges. The ship's ways were in operation to some time after 1935, but are presently closed. Much of the machinery from operation is still in place, including the way rails, the power plant, the crane, and several structures. While the integrity of the site has been damaged by modifications, it would still provide a unique opportunity to examine the technology of late nineteenth and early twentieth century ship building yards. The historic significance of the Marine Ways, both as the location of the construction of three Civil War gunboats and as the area's first heavy industry, is unquestioned. Site 11Pu 140, the Mound City Marine Ways, would appear to meet minimum criteria established for inclusion to the National Register of Historic Places. Recommendations will be made for detailed historic research, oral history, photo documentation, and mapping of components.

W-595-37 (Figure 12) State: Kentucky County: Ballard

Cultural Affiliation: Historic, late nineteenth-early twentieth century

Elevation: 305-310 feet MSL 93-94.5 meters MSL

Slope Direction: Northeast Slope Angle: 0-5°

Original Water Source: Sandy Slough/ Direction: Northwest Distance: 20 meters
Well?

Ground Cover: Soybeans Visibility: 60-80%

Property Owner: Unknown

Map Reference: Cairo ILL-KY-MO Previous Reference: None
1978

Site W-595-37 is a small, 50 x 25 foot (15 x 8 meters) northwest/south-east by southwest/northeast scatter of historic glass and ceramics located on a low rise west of Sandy Slough. The site, located south of the slough, is a thin scattering of material that suggests a domestic structure. No structure was noted at this location during a review of historic maps, but locals informed us that the bottoms had been occupied by numerous small shanties prior to their (the bottoms) purchase by major landholders. Because the site is not within the project area, no recommendations will be made.

PREHISTORIC

None

HISTORIC

Glass

- 1 Brown bottle glass
- 2 Lavender bottle glass
- 1 Light green bottle glass
- 2 Clear bottle glass
- 2 Blue-green bottle glass (1 base)

Ceramics

- 1 Ironstone, clear lead glaze
- 5 Ironstone, cobalt added (1 rim)
- 3 Ironstone, clear lead glaze, molded rim & polychrome overglaze transfer print
- 3 Buff paste earthenware, gray lead glaze ext., dark brown lead glaze int.
- 2 Gray paste earthenware, dark brown slipped ext. & int.
- 2 Buff paste earthenware, dark brown lead glaze etc., red-brown lead glaze int.
- 1 Gray paste stoneware, dark brown lead glaze int., medium brown lead glaze ext.
- 3 Buff paste stoneware, light gray lead glaze ext., dark brown lead glaze int.
- 1 Hard-paste porcelain, rim, plain

W-595- 47 (Figure 12) State: Kentucky County: Ballard
Cultural Affiliation: Historic, late nineteenth-early twentieth century
Elevation: 305-310 feet MSL 93-94.5 meters MSL
Slope Direction: West Slope Angle: 5-10°
Original Water Source: Probable Direction: Unknown Distance: Unknown
 Well
Ground Cover: Soybeans Visibility: 60-70%
Property Owner: Unknown
Map Reference: Cairo ILL-KY-MO, Previous Reference: None
 1978

Site W-595-47 is a very small, 20 x 20 foot (6 x 6 meters) scatter of historic glass and ceramics on a low levee remnant immediately to the east of Long Pond and north of an abandoned railroad grade. Very little material was observed or collected even though visibility was good. The nature of the material present does not suggest a house, but it is possible that the material is from a hunting camp or work camp associated with the railroad. No indications of a structure were observed in the field or noted on the historic maps reviewed. Because the site is not within the project area, no recommendations will be made.

PREHISTORIC

None

HISTORIC

Glass

2 Lavender container glass (1 base w/embossed pebble design)

Ceramics

- 2 Buff paste coarse earthenware, dark brown lead glazed ext./int.
- 1 Buff paste coarse earthenware, whitish lead glaze ext., dark brown lead glaze int. (base)
- 1 Gray paste coarse earthenware, reddish-brown lead glaze ext./int. (w/lug handle)

W-595- 48 (Figure 12) State: Kentucky County: Ballard
Cultural Affiliation: Historic, late nineteenth-early twentieth century
Elevation: 305-310 feet MSL 93-94.5 meters MSL
Slope Direction: West Slope Angle: 0-5°
Original Water Source: Possible Well Direction: Unknown Distance: Unknown
Ground Cover: Soybeans Visibility: 60%
Property Owner: Unknown
Map Reference: Cairo ILL-KY-MO Previous Reference: None
1978

Site W-595-48 is a small, 50 x 50 foot (15 x 15 meters) scatter of historic glass and ceramics located on a relatively level area east of Long Pond and north of W-595-47. While the material at this site is limited, the presence of "table wares," rather than glass and coarse earthenware such as at W-595-47, suggests a domestic structure. No structure was noted on the historic maps reviewed, and no evidence of either structures or features was observed in the field. Because this site is not within the project area, no recommendations will be made.

PREHISTORIC

None

HISTORIC

Glass

- 3 Milk glass container fragments
- 4 Clear bottle glass
- 1 Lavender bottle glass, w/embossed lettering

Ceramics

- 1 Ironstone, cobalt glaze, plain (base)
- 4 Ironstone, clear lead glaze, plain (1 base, 1 rim)
- 1 Buff paste stoneware, blue salt glaze ext., white salt glaze int.
- 1 Soft-paste porcelain, polychrome overglaze transfer print

VIII. SUMMARY AND RECOMMENDATIONS

The reconnaissance of the Lower Ohio River Navigation Area, Illinois and Kentucky, was conducted from July 22 to September 4, 1980. The survey resulted in the identification of 53 previously unrecorded sites and the relocation of 3 documented sites, ranging from the Archaic period to the mid-twentieth century. Fourteen of the newly recorded sites and 1 documented site are located in Illinois (10 in Massac County and 5 in Pulaski County), while the remaining 39 newly discovered sites and 2 documented sites are located in Kentucky (12 in McCracken County and 29 in Ballard County). Of these 56 sites, 19 are located within the designated survey area (14 in Illinois and 5 in Kentucky). Recommendations are provided for all sites within the proposed pool and easement areas.

Of the 56 sites identified or relocated during the reconnaissance, 31 contained prehistoric components, with the majority (21) being classified as nondiagnostic prehistoric. Nondiagnostic Woodland is the next most represented period with 4 sites. Following that is the Mississippian and late Archaic/early Woodland, with 2 sites each, and the Archaic and late Woodland/Mississippian, each represented by a single site. Of the 45 historic sites recorded, the majority (33) may be assigned to the late nineteenth century or later. Contrary to the views held by some researchers, most notably Wilson and Carlock (1977:34), it is the opinion of both the author and the principal investigator that significant historic sites do occur after the Civil War. A noteworthy example of this occurrence is the rail-barge transfer facility at Joppa, Illinois (W-595-25). Historic sites with components predating the late nineteenth century were also fairly common in the area with 12 being identified. A good indication of the continued growth of the area is the presence of components that may be assigned to the twentieth century on 38 of the newly recorded sites.

The distribution of sites was much as expected with the majority being located above the easement in the Barlow Bottoms area of Kentucky. Because of the primarily erosional nature of the Illinois side and the depositional nature of the Kentucky bank, the majority of the sites on easement occur in Illinois (14 of 19), where virtually all of the shoreline is eroding. Of the 5 sites recorded on easement in the Kentucky portions of the survey area, 1 is located in an erosional area below Lock and Dam 52, 1 is on Cache Island, and the remaining 3 in low areas of Barlow Bottoms, not associated with the present shoreline. Table 2 provides a listing of all sites recorded during the survey, their cultural affiliation, whether or not they are on easement, and if additional work is being recommended. UTM coordinates and locational information for the sites are provided in Appendix A and are not for distribution.

A total of 19 sites are located on easement (18 newly recorded and 1 previously recorded) within the project area. Of these 19 sites, 14 had been either totally destroyed by erosion or were felt to otherwise lack cultural integrity. Five sites (4 newly recorded sites and 1 known site) are recommended for additional work either because of demonstrated significance, as is the case with sites W-595-25 and 11Pu 140, or because the investigators were not able to determine exact location or integrity of the sites under restrictions set forth in the scope of services (sites W-595-1, W-595-39, and W-595-56.)

Table 2. Site Locations and Components

Site Number	State	County	Cultural Affiliation	Within Project Boundaries	Additional Work Recommended
W-595-1	Illinois	Massac	Nondiagnostic prehistoric	Yes	Yes
W-595-2	Illinois	Massac	Late 19th - 20th century	Yes	No
W-595-3	Illinois	Massac	Late 19th - 20th century	Yes	No
W-595-4	Illinois	Massac	Late 19th - 20th century	Yes	No
W-595-5	Illinois	Massac	Nondiagnostic prehistoric	Yes	No
W-595-6	Kentucky	McCracken	Late 19th - 20th century	Yes	No
W-595-7	Kentucky	McCracken	Nondiagnostic prehistoric	No	N/A
W-595-8	Kentucky	McCracken	Late 19th - 20th century		
W-595-9	Kentucky	McCracken	Nondiagnostic prehistoric	No	N/A
W-595-10	Kentucky	McCracken	Nondiagnostic prehistoric	No	N/A
W-595-11	Kentucky	McCracken	Mid-19th - 20th century		
W-595-12	Kentucky	McCracken	Prehistoric isolated find	No	N/A
W-595-13	Kentucky	McCracken	Late 19th - 20th century		
W-595-14	Kentucky	McCracken	Late Archaic - Early Woodland	No	N/A
W-595-15	Kentucky	McCracken	Late 19th - early 20th century	No	N/A
W-595-16	Kentucky	Ballard	Nondiagnostic prehistoric	No	N/A
W-595-17	Kentucky	Ballard	19th century isolated find	No	N/A
W-595-18	Kentucky	McCracken	Nondiagnostic prehistoric	No	N/A
W-595-19	Site Eliminated (mid- to late twentieth century)	Massac	Prehistoric isolated find	No	N/A
W-595-20	Illinois	Massac	Early 20th century	No	N/A
W-595-21	Illinois	Massac	Prehistoric isolated find	No	N/A
W-595-22	Illinois	Massac	Mid-19th century	No	N/A
			Prehistoric isolated find	No	N/A
			Mid-19th - early 20th century	No	N/A
			Archaic (Probable)	No	N/A
			Late 19th - early 20th century	No	N/A
			Early 20th century	No	N/A
			Nondiagnostic prehistoric	No	N/A
			Late 19th - early 20th century	No	N/A
			Prehistoric isolated find	No	N/A
			Early 20th century	No	N/A
			Prehistoric isolated find	No	N/A
			Mid-19th - early 20th century	No	N/A
			Archaic (Probable)	No	N/A
			Late 19th - early 20th century	No	N/A
			Early 20th century	No	N/A
			Nondiagnostic prehistoric	No	N/A
			Late 19th - early 20th century	No	N/A
			Nondiagnostic prehistoric	No	N/A
			Mid-19th century	No	N/A
			Nondiagnostic prehistoric	No	N/A
			Late 19th - early 20th century	No	N/A
			Nondiagnostic prehistoric	No	N/A
			Mid-19th century	No	N/A

<u>Site Number</u>	<u>State</u>	<u>County</u>	<u>Cultural Affiliation</u>	<u>Within Project Boundaries</u>	<u>Additional Work Recommended</u>
W-595-23	Number Skipped		Mid-19th - 20th century	Yes	No
W-595-24	Illinois	Pulaski	Late 19th - 20th century	Yes	Yes
W-595-25	Illinois	Massac	Late 19th - early 20th century	No	N/A
W-595-26	Kentucky	Ballard	Nondiagnostic prehistoric	No	N/A
W-595-27	Illinois	Massac	Late 19th - early 20th century		
W-595-28	Kentucky	Ballard	Nondiagnostic prehistoric	Yes	No
W-595-29	Kentucky	Ballard	Early 20th century	No	N/A
W-595-30	Kentucky	Ballard	Nondiagnostic prehistoric		
W-595-31	Kentucky	Ballard	Late 19th century	No	N/A
W-595-32	Kentucky	Ballard	Late Archaic/Early Woodland	No	N/A
W-595-33	Kentucky	Ballard	Early 20th century	No	N/A
W-595-34	Kentucky	Ballard	Nondiagnostic prehistoric	No	N/A
W-595-35	Kentucky	Ballard	Nondiagnostic prehistoric	No	N/A
W-595-36	Kentucky	Ballard	Nondiagnostic prehistoric	No	N/A
W-595-37	Kentucky	Ballard	Woodland	No	N/A
W-595-38	Kentucky	Ballard	19th - 20th century	No	N/A
W-595-39	Kentucky	Ballard	Nondiagnostic prehistoric	No	N/A
W-595-40	Kentucky	Ballard	Mississippian	No	N/A
W-595-41	Kentucky	Ballard	Late Woodland/Mississippian	No	N/A
W-595-42	Kentucky	Ballard	Mid-19th - early 20th century	No	N/A
W-595-43	Kentucky	Ballard	Late 19th - early 20th century	No	N/A
W-595-44	Kentucky	Ballard	Late 19th - early 20th century	Yes	Yes
W-595-45	Kentucky	Ballard	Woodland	No	N/A
W-595-46	Kentucky	Ballard	Late 19th - early 20th century	No	N/A
W-595-47	Kentucky	Ballard	Late 19th - early 20th century	No	N/A
W-595-48	Kentucky	Ballard	Nondiagnostic prehistoric	No	N/A
			Historic isolated find	No	N/A
			Mid-19th - early 20th century	No	N/A
			Nondiagnostic prehistoric	No	N/A
			Mid-19th - early 20th century	Yes	No
			Late 19th - early 20th century	No	N/A
			Late 19th - early 20th century	No	N/A

<u>Site Number</u>	<u>State</u>	<u>County</u>	<u>Cultural Affiliation</u>	<u>Within Project Boundaries</u>	<u>Additional Work Recommended</u>
W-595-49	Kentucky	Ballard	Mid-19th - early 20th century	Yes	No
W-595-50	Kentucky	Ballard	Late 19th - 20th century	No	N/A
W-595-51	Kentucky	Ballard	Early 20th century	No	N/A
W-595-52	Site Eliminated	(mid- to late twentieth century)		--	--
W-595-53	Kentucky	Ballard	Early - mid-19th century	No	N/A
W-595-54	Illinois	Pulaski	Early - mid-20th century	Yes	No
W-595-55	Illinois	Pulaski	Late 19th century	Yes	No
W-595-56	Illinois	Pulaski	Woodland/Mississippian	Yes	Yes
11Pu 140	Illinois	Pulaski	Early 20th century		
15McN 11	Kentucky	McCracken	Mid-19th - mid 20th-century	Yes	Yes
			Late Woodland/Mississippian	No	N/A
11Ba 14	Kentucky	Ballard	Late 19th - early 20th century		
			Late Woodland/Mississippian	No	N/A

The following recommendations are provided as minimal data recovery efforts for the sites involved, and should not be considered as final mitigation, which must be decided by the Corps of Engineers, Louisville District, in consultation with the Illinois State Historic Preservation Officer, the Kentucky State Historic Preservation Officer, and the Advisory Council on Historic Preservation. Prior to this, a determination of eligibility for inclusion to the National Register of Historic Places should be obtained by the Corps of Engineers for each site.

Site 11Pu 140 (The Mound City Marine Ways) (p. 17-18, 111, Plate 2, Figure 11)

1. The conduct of an intensive literature review for the development and use of the facility.
2. Oral historic research concerning the site.
3. Photographic documentation of existing components and, if possible, the collection of existing historic photographs.
4. Site mapping (it is the opinion of the investigators that this could best be accomplished from aerial photographs).

Site W-595-25 (The Joppa Rail-Barge Transfer Facility) (p. 20, 55, Plate 2, Figure 5)

1. The conduct of an intensive literature review for the development and use of facility.
2. Oral historic research on the site.
3. Photographic documentation of the facilities and the collection of historic photographs.
4. Site mapping (much of the site has been mapped by the Corps of Engineers, but the location of many of the functional components have been omitted).

Site W-595-1 (p. 36, Figure 3)

1. The excavation of a number of deep test units, possibly with a backhoe, to determine whether or not the material recovered is eroding from the lens of clay and gravel, and to determine cultural affiliation.
2. If the material is eroding from the clay lens, auger tests should be placed in the area behind the bank to determine the extent of the site and the land surface contours at the time of occupation.

Site W-595-39 (p. 83-84, Figure 9)

1. Controlled re-collection of the site using a 10 meter grid.
2. The excavation of sufficient test units (4 to 5) within the boundaries of the site to determine whether or not any intact

deposits exist and their depth, and to define cultural affiliation.

Site W-595-56 (p. 93-94, Figure 9)

1. An intensive survey of the bank area to determine the exact location and elevation of the deposit from which the material is eroding. This may involve stripping of ground cover and silt.
2. If the cultural deposit is found to be below the easement line, the placement of auger tests behind the bank to determine the extent of the site.
3. If the cultural deposit is found to be below the easement line, excavation of test units (number to be dependent on the size of the deposit) on the slope face to determine site integrity, depth of the deposit, and to further define cultural affiliation.

In addition to the site-specific recommendations provided above, additional recommendations are provided for the general project area. The Illinois bank of the Ohio River is, for the most part, an erosional formation in the project area. While the cutbank formation that extends from just below Metropolis to just below Olmstead has a low potential for unrecorded sites on easement, the areas of well-developed floodplains above Metropolis and below Olmstead may contain buried cultural resources that might be subject to exposure with increased water levels. The Kentucky portion of the project area is, for the most part, depositional in nature. While erosion is not considered to be a serious threat to the Kentucky bank of the pool, certain portions of the Kentucky bank (i.e., those between River Miles 940 and 945, and River Miles 954 and 969) might constructively be reexamined after post-construction high water has killed off the vegetation, allowing visual inspection of the ground surface. For the reasons noted, post-construction monitoring of these areas for exposed cultural material is recommended for two years following construction and operation.

REFERENCES CITED

Bader, Anne Tobbe, Joseph E. Granger, Philip J. DiBlasi, Bobbie K. Sudhoff, Louis Seig
 1977 Ohio River Environmental Assessment, Cultural Resources Reconnaissance Technical Report For the State of Kentucky Portion. Archaeological Survey, University of Louisville: Louisville, KY

Bates, Robert L., and Julia A. Jackson
 1980 Glossary of Geology, 2nd Edition. American Geological Institute: Falls Church, VA.

Bauxer, J. Joseph
 1978 History of the Illinois Area. In: Handbook of North American Indians, Vol. 15, Bruce G. Trigger, Volume Editor. Smithsonian Institution Press: Washington, DC. Pp. 594-601.

Bordes, Francois
 1968 The Old Stone Age, translation by J.E. Anderson. McGraw-Hill Publishing Company: New York, NY.

Brockman, C. Frank
 1968 A Field Guide to the Major Native and Introduced Species North of Mexico; Trees of North America. Western Publishing Company, Inc.: Racine, WI.

Burt, William H., and Richard P. Grossenheider
 1976 A Field Guide to the Mammals, Field Marks of All Species Found North of Mexico, 3rd Edition, Peterson Field Guide Series. Houghton Mifflin Company: Boston, MA.

Butler, Brian M., Glen P. Harrell, and Mary C. Hamilton
 1979 An Archaeological Reconnaissance of the Illinois Portions of the Smithland Pool of the Ohio River. Center for Archaeological Investigations, Research Paper 5, Southern Illinois University: Carbondale, IL.

Butzer, Karl
 1971 Environment and Archaeology. Aldine Publishing Company: Chicago, IL.

Caldwell, Joseph R.
 1958 Trend and Tradition in the Prehistory of the Eastern United States. American Anthropological Association, Memoir 88: Washington, DC.

Catton, Bruce
 1960 The American Heritage History of the Civil War. The American Heritage Publishing Company, Inc.: New York, NY.

Cole, Fay-Cooper, et al.
 1951 Kincaid, A Prehistoric Illinois Metropolis. University of Chicago Press: Chicago, IL.

Crabtree, Donald E.

- 1972 An Introduction to Flintworking. Occasional Papers of the Museum, Idaho State University, Number 28: Pocatello, ID.

DiBlasi, Philip J., and Bobbie K. Sudhoff

- 1987 An Archaeological Reconnaissance of the Kentucky Side of the Smithland Pool Project on the Ohio River. Archaeological Survey, University of Louisville: Louisville, KY.

Drucker, Lesley M., and Ronald W. Anthony

- 1979 The Spiers Landing Site: Archaeological Investigations in Berkeley County, South Carolina. Carolina Archaeological Services: Columbia, SC.

Fenneman, N.M.

Phonetic Alphabet of the Eastern United States. McGraw-Hill Publishing Company: New York, NY.

Fowler, Melvin L.

- 1959 Summary Report of Modoc Rock Shelter: 1952, 1953, 1955, 1956. Illinois State Museum, Reports of Investigation 8: Springfield, IL.

Gray, Marlesa A.

- n.d. An Alternative Identification of the Historic Ceramics from the East Aberdeen Site (22MO 819). Prepared for Interagency Archaeological Services, Atlanta, and the Department of Anthropology, Mississippi State University.

Holschlag, Stephanie L., Michael J. Rodeffer, and Marvin L. Cann

- 1978 Ninety-Six: The Jail. Star Fort Historical Commission: Ninety-Six, SC.

Howard, Robert P.

- 1972 Illinois: A History of the Prairie State. William B. Eerdmans Publishing Company: Grand Rapids, MI.

Lathrop, Steven D., and Vernon J. Grubisich

- 1970 Archaeological Site Survey: Fort Massac Project. In: Muller and Davy, Cultural Resources of the Ohio River Floodplain in Illinois.

Leopold, Luna B., M. Gordan Wolman, and John P. Miller

- 1964 Fluvial Processes in Geomorphology. W.H. Freeman and Company: San Francisco, CA.

Maxwell, Moreau S.

- 1951 The Woodland Cultures of Southern Illinois. Logan Museum Publications in Anthropology, Bulletin 7: Beloit, WI.

Miller, J. Jefferson, II, and Lyle M. Stone

- 1970 Eighteenth-Century Ceramics from Fort Michilimackinac. Smithsonian Institution Press: Washington, DC.

Moore, Clarence B.

- 1905 Certain Aboriginal Remains, Black Warrior River.
Journal of the Academy of Natural Sciences of Phila-
delphia, Second Series, Part 2, Volume XIII.

Muller, Jon D., and Douglas M. Davy

- 1977 Cultural Resources of the Ohio River Floodplain in Illinois.
Report prepared for the Huntington District Corps of Engi-
neers, Request No. DACW69-77-Q-0053.

Oakley, Carey B., and G. Michael Watson

- 1977 Cultural Resource Inventory of the Jones Bluff Lake, Ala-
bama River, Alabama. Report of Investigations No. 4, Office
of Archaeological Research, University of Alabama: Univer-
sity, AL.

Rehder, R. B.

- 1972 Climate and Man's Environment, An Introduction To Applied
Climatology. John Wiley and Sons, Inc.: New York, NY.

Olson, Stanley J.

- 1964 Mammal Remains from Archaeological Sites. Part 1 - South-
eastern and Southwestern United States. Papers of the
Peabody Museum of Archaeology and Ethnology, Volume 56,
Number 1: Cambridge, MA.

- 1968 Fish, Amphibian, and Reptile Remains from Archaeological
Sites. Part 1. Southeastern and Southwestern United
States. Papers of the Peabody Museum of Archaeology and
Ethnology, Volume 56, Number 2: Cambridge, MA.

Page, O.J.

- 1900 History of Massac County, Illinois: With Life Sketches
and Portraits. No publisher.

Parmalee, Paul W.

- 1967 The Freshwater Mussels of Illinois. Illinois State Museum,
Popular Science Series, Volume VIII: Springfield, IL.

Perino, Gregory

- 1968 Guide to the Identification of Certain American Indian
Projectile Points. Oklahoma Anthropological Society
Special Bulletin No. 3: Norman, OK.

Perrin, William Henry, ed.

- 1883 History of Alexander, Union, and Pulaski Counties, Illinois.
O.L. Baskins and Company, Historical Publishers: Chicago, IL.

Robbins, Chandles S., Bertel Brunn, and Herbert S. Zim

- 1966 A Guide to Field Identification; Birds of North America.
Western Publishing Company, Inc.: Racine, WI.

Scully, Edward G.

- 1951 Some Central Mississippi Valley Projectile Points. Museum
of Anthropology, University of Michigan: Ann Arbor, MI.

- Seegert, Gregory L.
n.d. Report in preparation, Terrestrial Biological Study, Lower Ohio River Navigation Area. WAPORA, Inc.: Cincinnati, OH.
- Starrett, William C.
1971 A Survey of the Mussels (Unionacea) of the Illinois River: A Polluted Stream. Illinois Natural History Survey Bulletin Volume 30, Article 5: Springfield, IL.
- Struever, Stuart
1964 The Hopewell Interaction Sphere in Riverine Western Great Lakes Culture History. In: Hopewellian Studies, Joseph Caldwell, editor. Illinois State Museum Scientific Papers, Vol. XII: Springfield, IL.
- Swanton, John R.
1946 The Indians of the Southeastern United States. Smithsonian Institution Bureau of American Ethnology, Bulletin 137: Washington, DC.
- Watson, G. Michael
1979a Archaeological and Historical Resource Survey for Proposed Additional Facilities at the Harllee Branch Generating Facility, Putnam County, Georgia. Prepared for the Georgia Power Company, Atlanta, Georgia. Soil Systems, Inc.: Marietta, GA.

1979b Cultural Resources Survey, Proposed "Fuse Plug" Spillway, Bartlett's Ferry Dam, Bartlett's Ferry, Alabama. Prepared for the Georgia Power Company, Atlanta, Georgia. Soil Systems, Inc.: Marietta, GA.
- White, Max E., G. Michael Watson, and Stephen H. Savage
1980 Archaeological Survey of the John H. Kerr Reservoir, Virginia-North Carolina. Report prepared for Booker Associates, Inc., Lexington, Kentucky. Soil Systems, Inc.: Marietta, GA.
- Wilson, David, and Margo Carlock
1977 Historical Overview. In: Muller and Davy, Cultural Resources of the Ohio River Floodplain in Illinois.
- Winters, Howard
1967 An Archaeological Survey of the Lower Wabash Valley in Illinois. Illinois State Museum, Reports of Investigations No. 10: Springfield, IL.
- Yarnell, Richard A.
1976 Early Plant Husbandry in Eastern North America. In: Culture Change and Continuity: Essays in Honor of James Bennet Griffen. Charles Cleland, editor. Academic Press: New York, NY.

Young, Bennet H.

1910

The Prehistoric Men of Kentucky. Filson Club Publication
No. 25. J.P. Morton and Company: Louisville, KY.

APPENDIX A

UTM Coordinates and Locational Information
for Located Sites

Not for Public Distribution

APPENDIX B

Scope of Services

MOUND CITY POOL, KENTUCKY AND ILLINOIS
ARCHAEOLOGICAL RESOURCES RECONNAISSANCE

SCOPE OF SERVICES

I. General. The services to be provided under this contract are those required to conduct, in the areas specified below, reconnaissance (Phase I) level archaeological investigations in the Mound City Locks and Dam Pool, Ohio River, Kentucky and Illinois, and to furnish both an interim draft findings of sufficient quality to be used for designing a testing (Phase II) program and a final professional quality report of the investigations. The areas to be investigated, and the timetable for accomplishment of work, are delineated below.

This contract is to be accomplished to meet the requirements of both the letter and spirit of Public Law 91-190 (NEPA), Public Law 93-291 (Reservoir Salvage Act of 1960, as amended), Public Law 89-665 (Historic Preservation Act of 1966), Public Law 96-95 (Archaeological Resources Protection Act of 1979), Presidential Executive Order 11593, and Corps of Engineers Regulations 1105-2-460. This reconnaissance effort shall be of a scope and quality to meet recognized study and reporting standards of the States of Kentucky and Illinois, and the Heritage Conservation and Recreation Service.

II. Study Area and Project Description. The considered Mound City Locks and Dam project is to be located on the Ohio River near Mound City, Illinois, 975 miles downstream from Pittsburgh, Pennsylvania. This project would serve to improve navigation on the portion of the Lower Ohio River bounded on the left bank by Ballard and McCracken Counties, Kentucky, and on the right bank by Pulaski and Massac Counties, Illinois.

III. Corps of Engineers Project Scheduling. The dam and related facilities are presently in the planning stage; construction and permanent impoundment dates have not yet been established. The presently described archaeological reconnaissance is being undertaken as one aspect of the overall project planning process. Contractor must fully accomplish work described below in strict compliance with the timetable which follows.

IV. Fiscal Arrangements. A detailed discussion of pertinent fiscal arrangements may be found in the attached cover contract specifications.

V. Reconnaissance and Report Schedule. The following schedule, if at all possible, shall be adhered to except under conditions beyond the control of the Contractor, during the conduct of the work covered by the Scope of Services. Any such conditions shall be reason for the Contractor to promptly notify the Contracting Officer's representative.

A. Reconnaissance Schedule. Actual fieldwork is to begin within 2 weeks of official notice to proceed from the Contracting Officer or as soon as river and weather conditions permit after that notification. Fieldwork for this portion of the reconnaissance program shall be completed within 5 weeks following the initiation of fieldwork. The following river mile segments (including applicable tributaries) shall be examined to the easement elevations

indicated in accordance with the week-by-week fieldwork schedule:

<u>Week</u>	<u>River Miles</u>	<u>Pool (Max.)</u>	<u>Easement (Est.)</u>
1	938.9 - 942.0	310.5'	312.0'
	942.0 - 946.0	310.0'	312.0'
2	946.0 - 950.0	309.0'	311.0'
	950.0 - 953.0	308.0'	310.0'
3	953.0 - 957.0	307.0'	309.0'
	957.0 - 960.0	306.0'	308.0'
4	960.0 - 964.0	305.0'	307.0'
	964.0 - 967.0	303.5'	305.0'
5	967.0 - 971.0	303.0'	305.0'
	971.0 - 975.0	301.5'	303.0'

B. Laboratory Analysis Schedule. To insure the timely completion of this project, it will be necessary to begin laboratory and related drafting operations concurrent with fieldwork.

C. Report Schedule. The draft copy of the reconnaissance report is due no later than 45 days after completion of fieldwork and should contain recommendations regarding future work at each site. This report, along with any remarks pertinent to textual changes or deficiencies, shall be reviewed by the Contracting Officer and returned to Contractor for completion of the press-ready form within 30 days. Press-ready final report will be submitted within 21 days after Contracting Officer's review.

D. Progress Report. During the conduct of the fieldwork, weekly progress reports shall be submitted by telephone. Biweekly progress reports shall be submitted in writing during the conduct of both the fieldwork and report preparation phases of the project.

E. Coordination of Scheduling. Contractor shall coordinate the scheduling of these investigations with the Contracting Officer or a designated representative, as well as activities such as safety and access.

VI. Contractor Services. The Contractor shall be responsible for conducting in the manner prescribed the reconnaissance fieldwork detailed below. Failure to fully meet the fieldwork and reporting requirements of this Scope of Services may be cause for termination of work for default of contract, or for an evaluation of unsatisfactory upon completion of the project.

A. Manpower and Facilities. The Contractor shall supply the necessary personnel, facilities, supplies, materials, and other equipment to conduct a reconnaissance of the archaeological cultural resources within the specified portions of the project area.

B. Contractor shall carry proper liability insurance policies to cover employees for injury or death.

C. Literature Search. Contractor shall utilize the studies entitled Ohio River Environmental Assessment Cultural Resources Reconnaissance Technical Report for the State of Kentucky Portion (1977) by Ann Tobe Bader, Joseph E. Granger, Philip J. DiBlasi, Bobbie K. Sudhoff, and Louis Seig, and Cultural Resources of the Ohio River Flood Plain in Illinois (1977) by Jon D. Muller and Douglas M. Davy as basic literature searches for this survey. Single copies of these reports will be furnished to the Contractor upon request. The National Register of Historic Places must also be consulted.

VII. Fieldwork. It must be emphasized that under no circumstances will collecting activities or riverbank profile drawing cause any damage to the extant riverbank. It is the responsibility of the Contractor to obtain right-of-entry permission for each land tract from the property owner. The description presented for each site shall include, as a minimum, information concerning: (1) precise UTM zone and coordinate location; (2) elevation; (3) physiography; (4) ground cover at time of survey and percentage of ground visibility; (5) USGS 7.5 minute quadrangle upon which the site is located; (6) name and address of property owner; (7) written description of site location with sufficient landmarks and distances to triangulate site location; (8) site dimensions if ascertainable; (9) previous references to the site in the available literature; (10) additional data or observations on the site or previous collections as appropriate; (11) a tabulation and quantified summation of the materials recovered during fieldwork; and (12) a concise summary statement regarding future work (Phase II testing) on the site. Additionally, when appropriate, faunal samples shall be saved and rough sorted into categories of mussels, mammal, etc., for a general overview of regional faunal utilization. Crew members are not authorized to cut or remove tress during the conduct of the fieldwork.

A. Safety. A Safety Plan must be prepared for submittal to both the Project Engineer and appropriate personnel of the Corps of Engineers District Office. Such a plan will clearly state which supervisory or crew personnel (if any) have First Aid training, the location of the nearest doctor's office and/or hospital, and other information relevant to safety standards, emergency medical treatment, and transportation to medical facilities. A sample Safety Plan will be supplied upon request to the Contractor.

B. Field Documentation. A photographic record of all investigations will be made, with negatives systematically labeled and organized to provide quick and easy retrieval. Xerox copies of all field notes, forms, and field maps shall be made and turned over to the Contracting Officer on the same date as, but separate from, the final report to help insure against their loss. All original notes, forms, and maps will be retained and curated with the artifact collections by the Contractor. The Contracting Officer also retains the right to request one print of any or all photophaphic negatives produced by this project and/or the use of such negatives no additional cost to the Contractor. A complete set of project maps showing the precise locations of all sites and cultural deposits shall also accompany the final report to the Louisville District.

C. Recommendations for Phase II Testing. Based upon the best possible evaluation of project impact, the Contractor will include in his report of findings discussions of appropriate testing (Phase II) procedures which should be undertaken at each site which appears likely to qualify for additional

investigations. Full and explicit reasons for recommending future work at each site must be detailed; it will not be adequate to write simply that further investigations are necessary or desirable. Rather, these recommendations must be supported with reasoned statements as to what information might be expected to result from future testing and why that information might be significant. Similarly, where no further testing or investigations are recommended for sites which appear likely to be impacted, the reasons established for arriving at that conclusion must be convincingly presented. In other words, all recommendations must be clearly justified and those justifications must be applied to both positive and negative evaluations.

VIII. Report Format. The report of investigations will include discussions in detail of the preceding services rendered. A detailed recommended final report format is outlined in Appendix B and should be followed or amended as appropriate. Site specific locational information and the Government Scope of Services shall be included as appendices in the final report of investigation. It is emphasized that the final report is expected to be a polished research report, suitable for publication, reflecting contemporary writing, organizational and illustrative standards of the professional archaeological journals. The Contractor shall furnish to the Contracting Officer one copy of the draft report. The final report will be furnished to the Contracting Officer in 28 professionally bound copies, two unbound copies (for submission to NTIS), and the original unbound camera-ready copy. All final reports must meet the following conditions.

A. Title Page. The title page of the report must bear an appropriate inscription indicating the source of funds used to conduct the reported work and the date (i.e., month and year) the report was submitted.

B. Authorship. If a report has been authorized by someone other than the contract Primary Principal Investigator, the cover and title page of the publishable report must bear the inscription Prepared Under the Supervision of (Name), Primary Principal Investigator. The Primary Principal Investigator is required to sign the original copy of the report.

C. Abstract. An abstract suitable for publication in an abstract journal must be prepared. This should consist of a brief, quotable summary useful for informing the technically oriented professional public of what the author considers to be the major contributions of the investigation to knowledge. The abstract should also contain a brief summation of the cultural resource management plan presented within the body of the text.

D. Foreword. If a report has been authored by someone other than the contract Primary Principal Investigator, the Primary Principal Investigator must at least prepare a foreword describing the overall research context of the report, the significance of the work, and any other related background circumstances relating to the manner in which the work was undertaken.

E. Page Size and Margins. Text materials shall be typed on fully white, offset bond paper, 120# substance (Government weight, 1,000 sheets 25 x 38), or equal, 8-1/2" x 11" with a 1-1/2" binding margin on left side, 1/2" on the right, and 1" at top and bottom, and 1 line spacing with double spacing between paragraphs. Final printed and bound copies of the report shall conform to similar page size requirements.

F. Illustrations. Drawings or plates shall not have an image larger than 10" x 16" with sufficient margin for binding on the left side. It is preferable, however, that illustrations be reduced to 8-1/2" x 11" format with suitable margin.

G. Pagination. All pages must be consecutively numbered.

H. Photographs. All photographs will contain an appropriate scale directional arrow located clearly in the frame.

I. References Cited. A single complete bibliography will list all sources and references consulted for both the body of the text and technical appendices required for special studies not specifically incorporated in the text of the report.

J. Publicity. Neither the Contractor nor his representative shall release or publish any sketch, photograph, report, or other material of any nature obtained or prepared under this contract without specific written approval of the Contracting Officer or a designated representative prior to the time of final acceptance of the report by the Government. For the purpose of this Scope of Services, publications shall include theses and/or dissertations. It is requested, however, that the Contractor or his designated successor supply the Louisville District with one copy of any paper, article, report, monograph, book, thesis, or dissertation based on data derived from the investigations described above following the life of this Scope of Services.

K. Government Rights. All reports, drawings, maps, photographs, notes, and other work developed in the performance of this agreement shall be and remain the sole property of the Government and may be used on any other work without additional compensation to the Contractor. The Contractor agrees not to assert any rights and not to establish any claims with respect thereto. The Contractor agrees to furnish and provide access to all retained materials on the request of the Contracting Officer.

In the event of controversy or court challenge, the Principal Investigator may be called upon to testify on behalf of the Government in support of his findings.

L. Responsibility for Materials and Related Data. Except as otherwise provided in this contract, the Contractor shall be responsible for any materials and related data covered by this contract until they are delivered to the Government at the designated delivery point and after delivery at the designated point, but prior to acceptance by the Government.

M. National Technical Information Service (NTIS). The report, through the Contracting Officer, will be maintained in microfiche by the National Technical Information Service (NTIS) and will be available to interested persons from NTIS. Each of the two unbound copies of the report is to include Form NTIS-35 (provided the Contractor by the Contracting Officer, Appendix C) as its first page. Blocks 4, 5, 7, 8, 9, 11, 12, 13, 14, 15, 16, 17b, and 21 of Form NTIS-35 will be completed by the Contractor.

Specific locations of sites found or otherwise identified as the result of

investigations under the contract which might be subject to vandalism will be deleted from the copy of the report furnished to NTIS. The report should be so organized that the deletion of this data and associated maps do not interfere with the readability of the report as a whole.

IX. Personnel and Institutional Standards. Agencies, institutions, corporations, associations, or individuals will be considered qualified when they meet the minimum criteria given below. As part of the supplemental documentation, a contract proposal must include vitae for the Principal Investigator, main supervisory personnel, and consultants in support of their academic and experiential qualifications for the research. In the event that support personnel have not been identified at the time of the contract proposal, vitae for supervisory positions may be omitted until such time as they are identified with the provision that those to be selected meet the minimum professional standards stated below and that their retention is subject to the Contracting Officer's authorized representative. Individuals lacking formal qualifications may present evidence of a publication record and references from archaeologists who do meet these qualifications.

A. Principal Investigator. Primary Principal Investigator for this contract shall hold a Ph.D. degree. He shall be responsible for the validity and professional quality of the material presented in the final report of findings, and will sign the report. The Primary Principal Investigator shall spend a minimum of 5 percent of the contract time in direct supervision of the project if assisted by a co-Principal Investigator.

The co-Principal Investigator shall hold the Ph.D. degree or academic qualifications acceptable to both the Primary Principal Investigator and the Corps of Engineers. Upon accepting this position, the co-Principal Investigator shall spend a minimum of 15 percent of contract time in direct supervision of the project. In the event a co-Principal Investigator is not selected or is unable to fulfill his responsibilities, the Primary Principal Investigator shall spend a minimum of 20 percent of contract time in direct supervision of the project.

B. Principal Investigator Responsibilities. The Principal Investigator(s) is expected to take an active part in each phase of the project, including the necessary fieldwork. He shall spend a minimum of 1 day of each week of fieldwork on the project site to insure that field crews are, in fact, making timely progress and keeping pace of the schedule of work outlined above. He shall also satisfy himself that his field parties are receiving full benefit of his professional direction.

C. Field and Laboratory Supervisors. Persons in charge of an archaeological project or research investigation contract must have a Master's Degree in Anthropology or an equivalent level of professional experience in field project formulation, execution, and technical monograph reporting, acceptable to both the Principal Investigator(s) and the Corps of Engineers. Suitable professional references may also be made available to obtain estimates regarding the adequacy of prior work. If prior projects were of a sort not ordinarily resulting in a publishable report, a narrative should be included detailing the proposed project supervisor's previous experience along

with references suitable to obtain professional opinions regarding the adequacy of this earlier work.

D. Archaeologist. The minimum formal qualifications for individuals practicing archaeology as a profession are a B.A., or B.S. degree from an accredited college or university, followed by 2 years of graduate study with concentration in anthropology and specialization in archaeology during one of these programs, or at least 1 year of professional experience as a substitute for graduate studies.

E. Consultants. Personnel hired or subcontracted for their special knowledge and expertise (historians, geologists, geographers, etc.) must carry academic and experiential qualifications in their own field of competence. Such qualifications are to be submitted to the Contracting Officer or a designated representative. If the consultant has not been retained at the time of identification, qualifications must be submitted until such time as they are identified, subject to approval of the Contracting Officer or a designated representative.

F. Institutional or Corporate Qualifications. Any institution, organization, etc., obtaining this contract, and sponsoring the Principal Investigator or project supervisor meeting the previously given requirements, must also provide or demonstrate access to the following capabilities.

1. Adequate field and laboratory equipment necessary to conduct whatever operations are defined in the scope of work. However, this qualification may be waived under circumstances of extreme need through negotiation.

2. Adequate facilities necessary for proper treatment, analysis, and storage of specimens and records likely to be obtained from a given project. This does not necessarily include such specialized facilities such as pollen, geochemical, or radiological laboratories, but does include facilities sufficient to preserve or stabilize specimens for any subsequent specialized analysis.

G. Disposition of Data. When the recovered data has been removed from non-Federally owned lands, such as State, municipal, corporation, or private, then negotiated arrangements must be made for permanent curation within the state of artifact origin. Such arrangements will be negotiated among the Louisville District, State Historic Preservation Officer, Office of State Archaeology (when appropriate), and the property owner. It is the responsibility of the Contractor to obtain right-of-entry and signed artifact release forms from property owners, and any required State or Federal permits (cf. Public Law 96-95) referable to cultural resource investigations. The materials recovered from Federal lands are the property of the Government and will normally be maintained at the institutional facility of the Principal Investigators on a "permanent loan" basis. Materials should always be retained and maintained in the State in which they were recovered and the arrangements of such storage and curation will be made by the Principal Investigator(s). Arrangements may also be made by the Contracting Officer with reputable museums and universities to provide storage and curatorial services for material recovered as a result of activities performed by Government personnel or by contract with private firms or institutions lacking adequate facilities

of this nature. Some materials may be required by the Corps of Engineers for interpretive displays for the information and benefit of the public.

X. Government Participation. Key Government personnel will be available to Contractor to furnish such information as is available and to insure Contractor access to all data, documents, and records in the District Office files needed for the contract. Contractor personnel will be expected to work in close coordination with the Contracting Officer, his representatives, or other assigned Government personnel. There shall be several meetings between the Contractor and his personnel, and the Contracting Officer and his representatives. A formal prework conference will be held prior to initiation of fieldwork to discuss Government Safety Regulations, project scheduling, and related matters. The Contractor will be required to attend all such meetings convened by the Contracting Officer on mutually agreed-upon dates. Additional informal, unscheduled meetings for the purpose of clarification, assistance, coordination, or other reasons will also be called by the Contractor or the Contracting Officer or his representatives. Some meetings may be held at the office of the Contracting Officer but most will be at the project site or other location as mutually agreed upon. All meetings are considered a part of the contract, and no extra payment will be made for attendance.

The Government, through any authorized representative, may at all reasonable times, inspect or otherwise evaluate the work being performed hereunder and the premises in which it is being performed. If any inspection or evaluation is made by the Government on the premises of the Contractor or his subcontractor, the Contractor shall provide and shall require his subcontractors to provide all reasonable facilities and assistance for the safety and convenience of the Government representatives in the performance of their duties. All inspections and evaluations will be performed in such a manner as will not unduly delay the work. Close coordination will be maintained between the Principal Investigators and the Government to insure that the Government's best interest is served.

XI. Guidelines. These investigations will be conducted in accordance with "Identification and Administration of Cultural Resources" (U.S. Army Corps of Engineers Regulations, ER 1105-2-460) and "Recovery of Scientific, Prehistoric, Historic and Archaeological Data: Methods, Standards and Reporting Requirements" (36 CFR Part 65).

XII. Data and Services Furnished by the Government. The following data and services shall be provided to the Contractor by the Government:

1. Identification and Administration of Cultural Resources (U.S. Army Corps of Engineers Regulations ER 1105-2-460).
2. 36 CFR 65, "Recovery of Scientific, Prehistoric, Historic, and Archaeological Data: Methods, Standards, and Reporting Requirements," published in the Federal Register, Vol. 42, 28 January 1977 (Appendix E).
3. Public Law 96-95, "Archaeological Resources Protection Act of 1979."

4. U.S. Army Corps of Engineers Manual EM 385-5-5, "General Safety Requirements" dated 1 June 1977.

5. U.S. Geological Survey 7.5' quadrangles of Mound City Pool project area (two sets).

6. Project maps at 1" equals 300' scale (two sets).

7. Aerial photographs of the project area will be supplied for use in the Louisville District Office only.

XIII. Special Conditions. When cultural resource studies are possibly related to a specific group of people whose descendants are still living in the general area, they should be informed of the studies, and consulted, especially where interpretive developments are being considered. Human skeletal remains gathered by this program of studies will not be replaced on public lands without the written approval of the Contracting Officer or a designated representative.

APPENDIX B
REPORT FORMAT AND CONTENTS

Title

Abstract

Table of Contents

Foreword (if applicable)

I. Introduction

A. Narrative regarding the study methodology.

B. General environmental setting.

C. Previous vicinity archaeological investigations.

II. Artifact Typology

Clear, concise, well-illustrated statement of typological approach used for the analysis.

III. Reconnaissance Results

A. Description of reconnaissance methodology.

B. Site by site descriptions. Narrative describing each individual site and site characteristics.

C. Photographs. Photographs of all sites will be included as indicated in paragraph VII. Photographs and all other illustrative materials shall be consecutively numbered and cited by number where appropriate within the body of the text.

D. Maps. Maps will be included indicating location of area studies and all sites and site boundaries located on U.S.G.S. 7.5' quadrangle maps, and other maps as appropriate.

IV. Conclusions/Recommendations

A. Summation of remarks concerning Phase II recommendations for sites recorded during reconnaissance portion of project.

B. General/specific concluding remarks including cost and time estimates for further investigations at selected sites.

V. Summary

References Cited

A bibliography following American Antiquity or American Anthropologist style will be included to indicate documents and publications used for the study. In the case of unpublished materials, note will be made of where such items are available for inspection. All citations shall include author's name as it appears on the publication or manuscript.

Appendices (as applicable)

Technical and/or consultants reports providing elaborative data concerning the project or analysis. The Government Scope of Services shall appear as an appendix. A detailed listing of catalogue numbers assigned to the recovered materials shall also be included in the report as an appendix.

Vitae

Vitae shall be presented in an appendix of persons participating in a supervisory capacity in the study and their academic qualifications.

APPENDIX C

Vitae of Key Personnel

VITA

Personal Information

Name: Marlesa Arlene Gray

PII Redacted

Office Address: WAPORA, Inc.
5700 Hillside Avenue
Cincinnati, Ohio 45233
Office Phone: (513) 941-6000

Education

Indiana University 1971-1975
A.B. degree with high honor granted June, 1975, in anthropology

Michigan State University 1975-present
M.A. degree granted June, 1978, in anthropology

Doctoral candidate in anthropology; comprehensive examinations passed May, 1978; dissertation topic--space utilization in enclosed trading posts

Professional Societies

Indiana Historical Society
Society for American Archaeology
Society for Historical Archaeology
Society for Industrial Archaeology

Offices Held

Student member, Indiana University Committee on Historic Preservation, 1974-1975
Board of Directors, Indiana Junior Historical Society Alumni Association, 1975-present
President, Anthropology Graduate Student Association, Michigan State University, 1976-1977

Honors Received

Alpha Lambda Delta, 1972
Hoosier Scholar, 1971-1974
Metz Scholar, Indiana University, 1972-1974
Phi Beta Kappa, 1974

Areas of Interest

Geographical - Eastern North America, especially the Great Lakes and Midwest; Pacific Northwest; Western Europe

Methodological - Development of interdisciplinary models for use in the analysis of space utilization, architectural traditions, and settlement patterns; historical ceramic analysis and dating; quantitative techniques

Substantive - Archeology, Method and Theory; Historical Archeology; Archeology of North America; Post-Medieval Archeology; Folklore; Folk Architecture; Cultural Geography; Historical Geography; Cultural Resource Management; Public Archeology

Papers Presented

- 1975 "Excavations at Two Historic Sites in Indiana." Indiana History Conference, November 7-8, Indianapolis, Indiana.
- 1978 "The Hudson's Bay Company in the Columbia Department: A Space Utilization Study." 11th Annual Meeting of the Society for Historical Archaeology, January 4-7, San Antonio, Texas
- 1979 "The Tombigbee Multi-Resource District: An Interdisciplinary Approach to Historic Sites Data." 12th Annual Meeting of the Society for Historical Archaeology, January 3-6, Nashville, Tennessee.

Professional Experience

- | | |
|----------------|---|
| July 1969 | Field school, Fort Ouiatenon, West Lafayette, Indiana, Dr. James H. Kellar (director) |
| August 1973 | Workshop director, Indiana Junior Historical Society, Sol Meredith Farm, Cambridge City, Indiana |
| May-June 1974 | Field school, Prairie Creek prehistoric site, Washington, Indiana, Dr. Patrick J. Munson (director) |
| June-July 1974 | Field assistant, Niemoeller-Mace Woodland site, Columbus, Indiana, Mr. Curtis Tomak (director) |

August 1974- May 1975	Laboratory assistant, Sonar and manual separation of flotation samples, Prairie Creek prehistoric site excavations, Dr. Patrick H. Munson (supervisor)
March 1975	Survey assistant, Clark Maritime Project, Jeffersonville, Indiana, Ms. Cheryl Munson (director)
May-August 1975	Field director, Brouillette House excavations, Vincennes, Indiana
August 1975	Field director, Cammack's Mill site, Wayne County, Indiana; in conjunction with the Indiana Junior Historical Society
September 1975- July 1976	Laboratory assistant, cataloguing and analysis of Fort Mifflin artifacts, Ms. Judith Green (supervisor)
November 1975	Survey assistant, Barago Indian reservation, Barago County, Michigan, Mr. Earl Pahl (director)
March-June 1976	Graduate teaching assistant, Michigan State University, Department of Anthropology, Dr. Gair Tourtellot (supervisor)
June-August 1976	Assistant field director, Sault Ste. Marie Archaeological Project, Fort Brady site, Sault Ste. Marie, Michigan, Mr. W. Lee Minnerly (director)
August 1976- June 1978	Graduate research assistant, Michigan State University, Department of Anthropology; Fort Vancouver research project, National Park Service Contract Number CX0001-6-0008, Dr. Charles E. Cleland (advisor)
July 1978- December 1979	Student intern, Interagency Archeological Services-Atlanta, U.S. Department of the Interior, Dr. Bennie C. Keel (supervisor)
July-August 1978	Co-investigator, Sproull House site, Greenwood County, South Carolina, with Ms. Jana Kellar
September 1978	Co-investigator, test excavations at the pottery waste dump, Greenwood County, South Carolina, with Dr. Stephanie H. Rodeffer, Mr. Michael Rodeffer, and Ms. Jana Kellar
May 1979	Historic ceramics analysis, East Aberdeen excavations, Aberdeen, Mississippi; consultant to Ms. B. Lea Baker and Dr. Janet Rafferty, Mississippi State University

June 1979	Historic ceramics analysis, Greenwood County Archaeological Survey, Greenwood County, South Carolina; consultant to Mr. Michael Rodeffer
September 1979	Architectural inventory of the Big River, Missouri; in conjunction with the U.S. Corps of Engineers, St. Louis District
January 1980 to present	Archaeologist, WAPORA, Inc., Cincinnati, Ohio

Publications and Reports

- Gray, M. 1974. The Pennville Project. Indiana History Bulletin.
- Gray, M. 1975. Preliminary report of excavations at Brouillette House, Vincennes, Indiana. Glenn D. Black Laboratory of Archaeology, Indiana University.
- Gray, M. 1980. Archaeological survey and testing, Moline Local Flood Protection Project, Rock Island County, Iowa. WAPORA, Inc., Cincinnati, Ohio.
- Gray, M. 1980. Archaeological survey and testing, Bettendorf Local Flood Protection Project, Scott County, Iowa. WAPORA, Inc., Cincinnati, Ohio.
- Gray, M., G.M. Watson, and W.K. Pape. 1980. Cultural resources survey of 24 miles of proposed pipeline right-of-way, Washington County, Ohio. WAPORA, Inc., Cincinnati, Ohio.
- Gray, M. In press. Structural aspects of Fort Vancouver, 1829-1860: An historical-archaeological interpretation. National Park Service.

VITA

G. Michael Watson

Education

Wright State University, Dayton, Ohio
B.A. in anthropology, 1976

University of Alabama, University, Alabama
Graduate Studies, Spring, 1977

Professional Memberships

The Florida Anthropological Society
The Alabama Archaeological Society
The Society for Georgia Archaeology, Council Member 1979-1980

Professional Experience

Summer 1974	Field School, Normandy, Tennessee, Wright State University, Dr. Bennie C. Keel
October-December 1975	Research assistant, Laboratory of Anthropology, Wright State University, Dr. Bennie C. Keel (supervisor)
January-March 1975	Student supervisor, Laboratory of Anthropology, Wright State University, Dr. Bennie C. Keel (supervisor)
March-June 1975	Field archaeologist, Cultural Resources Inventory of the East Fork Lake Park, Clermont County, Ohio; COE; Bennie C. Keel (Principal Investigator)
June 1976-June 1977	Field assistant, A Cultural Resources Inventory of the Jones Bluff Lake, Alabama River, Alabama; COE; Carey B. Oakley (Principal Investigator)
June-August 1977	Field assistant, Fourth Season at the Crooked Creek Lake Reservoir, Randolph County, Alabama; Alabama Power; Carey B. Oakley (Principal Investigator)
August-December 1977	Archaeological assistant, Office of Archaeological Research, the University of Alabama, University, Alabama, Eugene Futato (supervisor)
December 1977-December 1978	Survey archaeologist, Soil Systems, Inc., Earth Systems Division, Marietta, Georgia

December 1978- December 1979	Senior survey archaeologist, Soil Systems, Inc., Earth Systems Division, Marietta, Georgia
December 1979- June 1980	Archaeologist, Soil Systems, Inc., Earth Systems Division, Marietta, Georgia
June 1980 to present	Associate archaeologist, WAPORA, Inc., Cincinnati, Ohio

Selected Technical Reports

Contributing author:

An archaeological reconnaissance of East Fork Lake, Ohio. Reports in Anthropology No. 5. Laboratory of Anthropology, Wright State University, Dayton, Ohio. Dr. Fred C. Felt, Principal Investigator.

Co-author:

A cultural resources inventory of the Jones Bluff Lake, Alabama River, Alabama. 1977. Carey B. Oakley, Principal Investigator.

G.M. Watson. 1978. Archaeological survey of the Forsyth County Memorial Park. Forsyth County, North Carolina. John Dorwin, Principal Investigator.

G.M. Watson. 1978. A cultural resource inventory of the Pungo National Wildlife Refuge. Hyde and Washington Counties, North Carolina. Patrick Garrow, Principal Investigator.

G.M. Watson. 1978. A cultural resource inventory of the Pee Dee National Wildlife Refuge. Anson and Richmond Counties, North Carolina. Patrick Garrow, Principal Investigator.

G.M. Watson. 1978. A cultural resource investigation of the Mattamuskeet National Wildlife Refuge, Hyde County, North Carolina. Patrick Garrow, Principal Investigator.

G.M. Watson. 1978. An archaeological survey of the proposed Henderson 201 treatment facilities. Henderson, North Carolina. Patrick Garrow, Principal Investigator.

G.M. Watson with Patrick Garrow, et al. 1978. Archaeological, botanical, and wildlife survey, proposed Creedmoore 201 facilities. Creedmore, North Carolina. Patrick Garrow, Principal Investigator.

G.M. Watson. 1978. Colonial pipeline crossings of Sumtner National Forest, Abbeville, Greenwood, McCormick, and Edgefield Counties, South Carolina. Patrick Garrow, Principal Investigator.

G.M. Watson. 1978. An intensive archaeological survey of two unnamed archaeological sites in the proposed Hartwell Regional Visitors Center property. Oconee County, South Carolina. Patrick Garrow, Principal Investigator.

- G.M. Watson with Claudia L. Watson and Michael Hammond. 1979. A cultural resource survey for the city of Tarboro, North Carolina. Patrick Garrow, Principal Investigator.
- G.M. Watson. 1979. Archaeological and historical resource survey for proposed additional facilities at the Harllee Branch Generating Facility. Putnam County, Georgia. Patrick Garrow, Principal Investigator.
- G.M. Watson with Patrick Garrow and Jack Bernhardt. 1979. Archaeological survey and testing of proposed petroleum products pipeline river crossings on the Etowah and Oostanaula Rivers. Floyd County, Georgia. Patrick Garrow, Principal Investigator.
- G.M. Watson. 1979. Environmental inventory, Gadsden, Alabama 201 planning.
- G.M. Watson with Max White, et al. 1979. An archaeological survey of the John H. Kerr, Virginia and North Carolina, Vol. I, II. Patrick Garrow, Principal Investigator.
- G.M. Watson with David Ettman. 1979. Archaeological, botanical, and wildlife survey proposed 201 wastewater facilities, Waxhaw, North Carolina. Patrick Garrow, Principal Investigator.
- G.M. Watson. 1979. Cultural resources survey, proposed "fuse plug" spillway, Bartlett's Ferry Dam, Bartlett's Ferry, Alabama. Patrick Garrow, Principal Investigator.
- G.M. Watson. 1979. Archaeological testing of a temporary construction related railroad at the Bartlett's Ferry Dam, Bartlett's Ferry, Alabama. Patrick Garrow, Principal Investigator.
- G.M. Watson with David Ettman. 1979. Decherd, Tennessee wastewater treatment plant site, force mains and interceptor, archaeological and botanical survey. Patrick Garrow, Principal Investigator.
- G.M. Watson and Claudia L. Watson. 1980. Cultural resource survey, proposed expansion of the water and sewer system and related areas. Walker County, Georgia. Patrick Garrow, Principal Investigator.
- G.M. Watson with W. Michael Hammond. 1980. Archaeological survey of a 35 acre housing development tract, Rivesville, West Virginia.
- G.M. Watson. 1980. Cultural resources survey of the Harrison County Model Housing Development, Clarksburg, West Virginia. Patrick Garrow, Principal Investigator.
- G.M. Watson with Claudia L. Watson. 1980. A cultural resources survey of new and existing pipeline corridors for the Columbia Gas Transmission Corporation in eight counties in West Virginia and Virginia. Patrick Garrow, Principal Investigator.

G.M. Watson with W. Kevin Pape and Marlesa A. Gray. 1980. A cultural resources survey of 24 miles of proposed pipeline right-of-way, Washington County, Ohio. Marlesa A. Gray, Principal Investigator.